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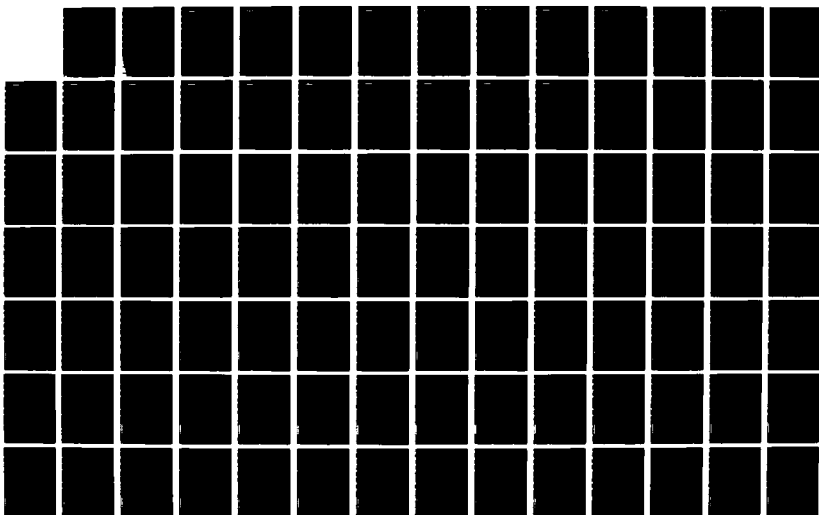
INSTALLATION RESTORATION PROGRAM PHASE 2  
CONFIRMATION/QUANTIFICATION STAG. (U) RADIAN CORP  
AUSTIN TX DEC 87 F33615-83-D-4001

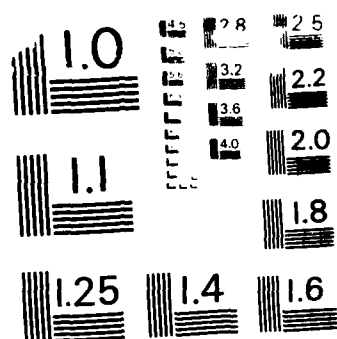
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MICROCOPY RESOLUTION TEST CHART  
 NATIONAL BUREAU OF STANDARDS-1963-A

DCN 87-212-027-27-01

INSTALLATION RESTORATION PROGRAM  
PHASE II - CONFIRMATION/QUANTIFICATION  
STAGE 1

FINAL REPORT  
FOR  
AIR FORCE PLANT 4  
FORT WORTH, TEXAS

VOLUME 3. APPENDIX A-1 (CONTINUED)

HEADQUARTERS AERONAUTICAL SYSTEMS DIVISION  
FACILITIES MANAGEMENT DIVISION (ASD/PMDA)  
WRIGHT-PATTERSON AIR FORCE BASE, OHIO 45433-6503

AND

HEADQUARTERS, AIR FORCE SYSTEMS COMMAND  
COMMAND BIOENVIRONMENTAL ENGINEER (AFSC/SGPB)  
ANDREWS AIR FORCE BASE, DC 20334-5000

DECEMBER 1987

PREPARED BY  
RADIAN CORPORATION  
8501 MO-PAC BOULEVARD  
POST OFFICE BOX 201088  
AUSTIN, TEXAS 78720-1088

USAF CONTRACT NO. F33615-83-D-4001 DELIVERY ORDER 27  
RADIAN CONTRACT NO. 212-027-27

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USAFEOHL TECHNICAL PROGRAM MANAGERS  
MAJOR GEORGE R. NEW  
CAPTAIN ARTHUR S. KAMINSKI

UNITED STATES AIR FORCE  
OCCUPATIONAL & ENVIRONMENTAL HEALTH LABORATORY (USAFEOHL)  
BROOKS AIR FORCE BASE, TEXAS 78235-5501

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**RADIAN**  
CORPORATION

↓  
*This report contains data on water quality and environmental protection.*

NOTICE

↓  
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By	
Distribution/	
Availability Codes	
Dist	Avail and/or Special
A-1	



APPENDIX A-1 (Continued)  
Groundwater Analytical Data

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TABLE A.1-3. DUPLICATE OF TABLE A.1-1 OF INDEX OF ANALYTICAL  
REPORTS, BY WORK ORDER NUMBER

Volume 2	Volume 3	Volume 4
86-01-239	86-02-067	86-02-169
86-01-240	86-02-070	86-02-176
86-01-242	86-02-075	86-02-179
86-02-001	86-02-078	86-02-197
86-02-004	86-02-079	86-02-198
86-02-015	86-02-087	86-03-002
86-02-016	86-02-091	86-03-003
86-02-019	86-02-100	86-03-004
86-02-030	86-02-109	86-03-018
86-02-031	86-02-113	86-03-021
86-02-038	86-02-120	86-04-069
86-02-041	86-02-122	86-04-070
86-02-044	86-02-123	86-04-084
86-02-047	86-02-132	86-04-085
86-02-058	86-02-138	86-04-135
86-02-060	86-02-139	86-04-164
	86-02-152	86-07-086
	86-02-159	86-07-088
		86-07-095
		86-08-034
		86-08-058
		86-08-078
		86-08-092
		86-08-093
		86-08-094
		86-08-095
		86-08-096

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TABLE A. 1-4. GROUNDWATER AND SURFACE WATER SAMPLE LOG AND CROSS-REFERENCE TABLE

Well or Soil Boring Number	OEHL Number	Date Sampled	Analyses Performed	RAS Work			Comments
				Order Number	Date Extracted	Date Analyzed	
HM-2	860184	2/20/86	Hydrogenated vols. (601)	86-02-138			
			Aromatic vols. (602)	86-02-138			
			Pesticides & PCBs (608)	86-02-132	2/24/86	3/6/86	
			B/N & Acid Semi-vols. (625)	86-02-132	2/24/86	3/6/86	
HM-5	860152	2/12/86	Metals	86-02-139			
			Hydrogenated vols. (601)	86-02-075			
			Aromatic vols. (602)	86-02-075			
			Pesticides & PCBs (608)	86-02-078	2/13/86	2/27/86	
HM-7	860162	2/13/86	B/N & Acid Semi-vols. (625)	86-02-078	2/13/86	2/27/86	
			Metals	86-02-079			
			Hydrogenated vols. (601)	86-02-087			
			Aromatic vols. (602)	86-02-087			
HM-8	860161	2/13/86	Pesticides & PCBs (608)	86-02-091	2/17/86	3/5/86	
			B/N & Acid Semi-vols. (625)	86-02-091	2/17/86	3/5/86	
			Metals	86-02-087			
			Hydrocarbon Fuels	86-02-087			
HM-9	860206	2/27/86	Hydrogenated vols. (601)	86-02-197			
			Aromatic vols. (602)	86-02-197			
			Pesticides & PCBs (608)	86-02-198	3/3/86	3/13/86	
			B/N & Acid Semi-vols. (625)	86-02-198	3/3/86	3/13/86	
HM-10	860137	2/7/86	Metals	86-02-197			
			Halogenated vols. (601)	86-02-047			
			Aromatic vols. (602)	86-02-047			
			Pesticides & PCBs (608)	86-02-044	2/10/86	2/25/86	
HM-11	860146	2/10/86	B/N & Acid Semi-vols. (625)	86-02-044	2/10/86	2/25/86	
			Metals	86-02-047			
			Hydrogenated vols. (601)	86-02-060			
			Aromatic vols. (602)	86-02-060			
HM-12	860165	2/14/86	Pesticides & PCBs (608)	86-02-058	2/12/86	2/26/86	
			B/N & Acid Semi-vols. (625)	86-02-058	2/12/86	2/26/86	
			Metals	86-02-060			
			Hydrogenated vols. (601)	86-02-100			
HM-13	860178	2/19/86	Aromatic vols. (602)	86-02-100			
			Pesticides & PCBs (608)	86-02-109	2/18/86	3/5/86	
			B/N & Acid Semi-vols. (625)	86-02-109	2/18/86	3/5/86	
			Metals	86-02-100			
HM-14	860177	2/19/86	Hydrogenated vols. (601)	86-02-120			
			Aromatic vols. (602)	86-02-120			
			Pesticides & PCBs (608)	86-02-122	2/20/86	3/5/86	
			B/N & Acid Semi-vols. (625)	86-02-122	2/20/86	3/5/86	
HM-15	860193	2/25/86	Metals	86-02-120			
			Hydrocarbon Fuels	86-02-120			
			Hydrogenated vols. (601)	86-02-159			
			Aromatic vols. (602)	86-02-159			

(continued)

TABLE A. 1-4. (Continued)

Well or Soil Boring Number	OEHL Number	Date Sampled	Analyses Performed	RAS Work Order Number	Date Extracted	Date Analyzed	Comments
HM-16	860147	2/11/86	Hydrogenated vols. (601)	86-02-067			
			Aromatic vols. (602)	86-02-067			
			Pesticides & PCBs (608)	86-02-070	2/12/86	2/27/86	
			B/N & Acid Semi-vols. (625)	86-02-070	2/12/86	2/27/86	
HM-17	860149	2/11/86	Metals	86-02-067			
			Hydrogenated vols. (601)	86-02-067			
			Aromatic vols. (602)	86-02-067			
			Pesticides & PCBs (608)	86-02-070	2/12/86	2/27/86	
HM-18	860150	2/11/86	B/N & Acid Semi-vols. (625)	86-02-070	2/12/86	2/27/86	
			Metals	86-02-067			
			Hydrogenated vols. (601)	86-02-067			
			Aromatic vols. (602)	86-02-067			
HM-19	860217	3/1/86	Pesticides & PCBs (608)	86-02-070	2/12/86	2/27/86	
			B/N & Acid Semi-vols. (625)	86-02-070	2/12/86	2/27/86	
			Metals	86-02-067			
			Hydrogenated vols. (601)	86-03-003			
HM-20	860109	1/31/86	Aromatic vols. (602)	86-03-003			
			Oil and Grease	86-03-004			
			Hydrocarbon Fuels	86-03-004			
			Halogenated vols. (601)	86-02-001			
HM-21	860138	2/7/86	Aromatic vols. (602)	86-02-001			
			Pesticides & PCBs (608)	86-02-004	2/3/86	2/12/86	
			B/N & Acid Semi-vols. (625)	86-02-004	2/3/86	2/12/86	
			Metals	86-02-001			
HM-22	860181	2/20/86	Halogenated vols. (601)	86-02-047			
			Aromatic vols. (602)	86-02-047			
			Pesticides & PCBs (608)	86-02-044	2/10/86	2/25/86	
			B/N & Acid Semi-vols. (625)	86-02-044	2/10/86	2/25/86	
HM-23	860174	2/18/86	Metals	86-02-047			
			Hydrogenated vols. (601)	86-02-138			
			Aromatic vols. (602)	86-02-138			
			Pesticides & PCBs (608)	86-02-132	2/24/86	3/6/86	
HM-24	860176	2/19/86	B/N & Acid Semi-vols. (625)	86-02-132	2/24/86	2/6/86	
			Metals	86-02-113			
			Oil and Grease	86-02-113			
			Hydrocarbon Fuels	86-02-113			
HM-25	860148	2/11/86	Hydrogenated vols. (601)	86-02-120			
			Aromatic vols. (602)	86-02-120			
			Pesticides & PCBs (608)	86-02-122	2/20/86	3/6/86	
			B/N & Acid Semi-vols. (625)	86-02-122	2/20/86	3/6/86	
			Metals	86-02-120			
			Hydrogenated vols. (601)	86-02-067			
			Aromatic vols. (602)	86-02-067			
			Pesticides & PCBs (608)	86-02-070	2/12/86	2/27/86	
			B/N & Acid Semi-vols. (625)	86-02-070	2/12/86	2/27/86	
			Metals	86-02-067			
			Hydrogenated vols. (601)	86-02-067			
			Aromatic vols. (602)	86-02-067			

(continued)

TABLE A. 1-4. (Continued)

Well or Soil Boring Number	OEHL Number	Date Sampled	Analyses Performed	RAS Work Order Number	Date Extracted	Date Analyzed	Comments
HM-26	860112	1/31/86	Halogenated vols. (601)	86-02-001			
			Aromatic vols. (602)	86-02-001			
			Pesticides & PCBs (608)	86-02-004	2/3/86	2/11/86	
			Pesticides & PCBs (608)	86-02-016	2/4/86	2/14/86	Duplicate analysis
			B/N & Acid Semi-vols. (625)	86-02-004	2/3/86	2/11/86	
HM-27	860113	1/31/86	B/N & Acid Semi-vols. (625)	86-02-016	2/4/86	2/14/86	Duplicate analysis
			Metals	86-02-001			
			Halogenated vols. (601)	86-02-001			
			Aromatic vols. (602)	86-02-001			
			Pesticides & PCBs (608)	86-02-016	2/4/86	2/14/86	
HM-28	860132	2/6/86	B/N & Acid Semi-vols. (625)	86-02-016			
			Metals	86-02-001			
			Halogenated vols. (601)	86-02-041			
			Aromatic vols. (602)	86-02-041			
			Pesticides & PCBs (608)	86-02-038	2/10/86	2/24/86	
HM-28	860133	2/6/86	B/N & Acid Semi-vols. (625)	86-02-038	2/10/86	2/24/86	
			Metals	86-02-041			
			Pesticides and PCBs (608)	86-02-038			
			B/N & Acid Semi-vol. (625)	86-02-038			
			Hydrogenated vols. (601)	86-02-138			
HM-29	860189	2/21/86	Aromatic vols. (602)	86-02-138			
			Pesticides & PCBs (608)	86-02-152	2/25/86	3/11/86	
			B/N & Acid Semi-vols. (625)	86-02-152	2/25/86	3/11/86	
			Metals	86-02-139			
			Oil and Grease	86-02-139			
HM-30	860163	2/13/86	Hydrocarbon Fuels	86-02-139			
			Hydrogenated vols. (601)	86-02-087			
			Aromatic vols. (602)	86-02-087			
			Pesticides & PCBs (608)	86-02-091	2/17/86	3/5/86	
			B/N & Acid Semi-vols. (625)	86-02-091	2/17/86	3/5/86	
HM-31	860166	2/14/86	Metals	86-02-087			
			Hydrogenated vols. (601)	86-02-100			
			Aromatic vols. (602)	86-02-100			
			Pesticides & PCBs (608)	86-02-109	2/18/86	3/5/86	
			B/N & Acid Semi-vols. (625)	86-02-109	2/18/86	3/5/86	
HM-32	860164	2/14/86	Metals	86-02-100			
			Oil and Grease	86-02-100			
			Hydrocarbon Fuels	86-02-100			
			Hydrogenated vols. (601)	86-02-100			
			Aromatic vols. (602)	86-02-109			
HM-33	860207	2/28/86	Pesticides & PCBs (608)	86-02-109	2/18/86	3/5/86	
			B/N & Acid Semi-vols. (625)	86-02-109	2/18/86	3/5/86	
			Metals	86-02-100			
			Hydrogenated vols. (601)	86-03-002			
			Aromatic vols. (602)	86-03-002			
HM-33	860207	2/28/86	Oil and Grease	86-03-004			
			Hydrocarbon Fuels	86-03-004			
			Hydrogenated vols. (601)	86-03-002			
			Aromatic vols. (602)	86-03-002			
			Oil and Grease	86-03-004			

(continued)

TABLE A. 1-4. (Continued)

Well or Soil Boring Number	ORHL Number	Date Sampled	Analyses Performed	RAS Work Order Number	Date Extracted	Date Analyzed	Comments
HM-33	860208	2/28/86	Hydrogenated vols. (601) Aromatic vols. (602) Oil and Grease	86-03-002 86-03-002 86-03-004			Duplicate of 860207
HM-34	860204	2/27/86	Hydrocarbon Fuels Hydrogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-02-197 86-02-197 86-02-197 86-02-198 86-02-198 86-02-197	3/3/86 3/3/86	3/13/86 3/13/86	
HM-34	860205	2/27/86	Hydrogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-02-197 86-02-197 86-02-198 86-02-198 86-02-197	3/3/86 3/3/86	3/13/86 3/13/86	Duplicate of 860204
HM-35	860203	2/27/86	Hydrogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-02-197 86-02-197 86-02-198 86-02-198 86-02-197	3/3/86 3/3/86	3/13/86 3/13/86	
HM-36	860202	2/27/86	Hydrogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-02-197 86-02-197 86-02-198 86-02-198 86-02-197	3/3/86 3/3/86	3/13/86 3/13/86	
HM-37	860114	1/31/86	Halogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-02-001 86-02-001 86-02-004 86-02-004 86-02-001	2/3/86 2/3/86	2/12/86 2/12/86	
HM-38	860188	2/21/86	Hydrogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-02-138 86-02-138 86-02-152 86-02-152 86-02-197	2/25/86 2/25/86	3/10/86 3/10/86	
HM-39	860201	2/27/86	Hydrogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-02-197 86-02-198 86-02-198 86-02-198 86-02-197	3/3/86 3/3/86	3/13/86 3/13/86	
HM-40	860194	2/25/86	Hydrogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-02-159 86-02-155 86-02-169 86-02-169 86-02-159	2/27/86 2/27/86	3/12/86 3/11/86	
HM-41	860192	2/25/86	Hydrogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-02-159 86-02-159 86-02-169 86-02-169 86-02-159	2/27/86 2/27/86	3/12/86 3/12/86	



TABLE A. 1-4. (Continued)

Well or Soil Boring Number	OEHL Number	Date Sampled	Analyses Performed	RAS Work Order Number	Date Extracted	Date Analyzed	Comments
HM-42	860183	2/20/86	Hydrogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-02-138 86-02-138 86-02-132 86-02-132 86-02-139	2/24/86 2/24/86	3/6/86 3/6/86	
HM-43	860182	2/20/86	Hydrogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-02-138 86-02-138 86-02-132 86-02-132 86-02-139	2/24/86 2/24/86	3/6/86 3/6/86	
HM-44	860190	2/25/86	Hydrogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-02-159 86-02-159 86-02-169 86-02-169 86-02-159	2/27/86 2/20/86	3/12/86 3/12/86	
HM-45	860191	2/25/86	Hydrogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-02-159 86-02-159 86-02-169 86-02-169 86-02-159	2/27/86 2/27/86	3/12/86 3/12/86	
HM-46	860185	2/20/86	Hydrogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-02-138 86-02-138 86-02-132 86-02-132 86-02-139	2/24/86 2/24/86	3/6/86 3/6/86	
HM-47	860130	2/6/86	Halogenated vols. (601) Aromatic vols. (602) Metals Oil and Grease Hydrocarbon Fuels Halogenated vols. (601) Aromatic vols. (602) Metals	86-02-041 86-02-041 86-02-041 86-02-041 86-02-041 86-02-041 86-02-041			Duplicate of 860130
HM-48	860167	2/14/86	Hydrocarbon Fuels Hydrogenated vols. (601) Aromatic vols. (602) Chromium	86-02-041 86-02-100 86-02-100 86-02-100			
HM-49	860156	2/12/86	Hydrogenated vols. (601) Aromatic vols. (602) Oil and Grease Hydrocarbon Fuels	86-02-075 86-02-075 86-02-079 86-02-079			
HM-50	860157	2/12/86	Hydrogenated vols. (601) Aromatic vols. (602) Oil and Grease Hydrocarbon Fuels	86-02-075 86-02-075 86-02-079 86-02-079			

(continued)

TABLE A. 1-4. (Continued)

Well or Soil Boring Number	OEHL Number	Date Sampled	Analyses Performed	RAS Work Order Number	Date Extracted	Date Analyzed	Comments
HM-51	860151	2/11/86	Hydrogenated vols. (601) Aromatic vols. (602) Oil and Grease	86-02-067 86-02-067 86-02-067			
HM-52	860141	2/10/86	Hydrocarbon Fuels Halogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-02-060 86-02-060 86-02-060 86-02-058 86-02-058 86-02-060	2/12/86 2/12/86	2/26/86 2/26/86	
HM-52	860142	2/10/86	Oil and Grease Hydrocarbon Fuels Halogenated vols. (601) Aromatic vols. (602) Metals	86-02-060 86-02-060 86-02-060 86-02-060 86-02-060			Duplicate of 860141
HM-53	860145	2/10/86	Oil and Grease Hydrocarbon Fuels	86-02-060 86-02-060			
HM-54	860143	2/10/86	Hydrocarbon Fuels Halogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-02-060 86-02-060 86-02-060 86-02-058 86-02-058 86-02-060	2/12/86 2/12/86	2/26/86 2/26/86	
HM-54	860144	2/10/86	Oil and Grease Hydrocarbon Fuels Pesticides and PCBs (608) B/N & Acid Semi-vols. (625)	86-02-060 86-02-060 86-02-058 86-02-058	2/12/86 2/12/86	2/26/86 2/26/86	Duplicate of 860143
HM-55	860119	2/4/86	Hydrocarbon Fuels Oil and Grease	86-02-123 86-02-019			
HM-56	860186	2/21/86	Hydrogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-02-138 86-02-138 86-02-152 86-02-152 86-02-139	2/25/86 2/25/86	3/10/86 3/10/86	
HM-57	860200	2/26/86	Hydrocarbon Fuels Purgeables (624) Hydrogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-02-139 86-02-152 86-02-176 86-02-176 86-02-179 86-02-179 86-02-176	2/28/86 2/28/86	3/12/86 3/12/86	
HM-58	860195	2/26/86	Oil and Grease Hydrocarbon Fuels Hydrogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-02-176 86-02-176 86-02-176 86-02-176 86-02-179 86-02-179 86-02-176	2/28/86 2/28/86	3/12/86 3/12/86	
			Oil and Grease Hydrocarbon Fuels	86-02-176 86-02-176			

TABLE A. 1-4. (Continued)

Well or Soil Boring Number	OEHL Number	Date Sampled	Analyses Performed	RAS Work Order Number	Date Extracted	Date Analyzed	Comments
HM-58	860196	2/26/86	Hydrogenated vols. (601)	86-02-176			Duplicate of 860195
			Aromatic vols. (602)	86-02-176			
			Pesticides & PCBs (608)	86-02-179			
			B/N & Acid Semi-vols. (625)	86-02-179			
			Metals	86-02-176			
HM-59	860113	2/3/86	Oil and Grease	86-02-176			
			Hydrocarbon Fuels	86-02-176			
			Halogenated vols. (601)	86-02-015			
			Aromatic vols. (602)	86-02-015			
			Pesticides & PCBs (608)	86-02-016	2/4/86	2/14/86	
HM-60	860134	2/6/86	B/N & Acid Semi-vols. (625)	86-02-016	2/4/86	2/14/86	
			Metals	86-02-015			
			Oil and Grease	86-02-015			
			Hydrocarbon Fuels	86-02-015			
			Halogenated vols. (601)	86-02-041			
HM-61	860198	2/26/86	Aromatic vols. (602)	86-02-041			
			Pesticides & PCBs (608)	86-02-038	2/10/86	2/25/86	
			B/N & Acid Semi-vols. (625)	86-02-038	2/10/86	2/25/86	
			Metals	86-02-041			
			Hydrogenated vols. (601)	86-02-176			
HM-62	860216	3/1/86	Aromatic vols. (602)	86-02-176			
			Metals	86-02-176			
			Oil and Grease	86-02-176			
			Hydrocarbon Fuels	86-02-176			
			Hydrogenated vols. (601)	86-03-003			
HM-63	860138	2/7/86	Aromatic vols. (602)	86-03-003			
			Pesticides & PCBs (608)	86-03-021	3/5/86	3/24/86	
			B/N & Acid Semi-vols. (625)	86-03-021	3/5/86	3/24/86	
			Metals	86-03-004			
			Halogenated vols. (601)	86-02-047			
HM-64	860197	2/26/86	Aromatic vols. (602)	86-02-047			
			Pesticides & PCBs (608)	86-02-044	2/10/86	2/25/86	
			B/N & Acid Semi-vols. (625)	86-02-044	2/10/86	2/25/86	
			Metals	86-02-047			
			Hydrogenated vols. (601)	86-02-176			
HM-65	860158	2/12/86	Aromatic vols. (602)	86-02-176			
			Pesticides & PCBs (608)	86-02-179	2/28/86	3/12/86	
			B/N & Acid Semi-vols. (625)	86-02-179	2/28/86	3/12/86	
			Metals	86-02-176			
			Oil and Grease	86-02-176			
HM-66	860158	2/12/86	Hydrocarbon Fuels	86-02-176			
			Hydrogenated vols. (601)	86-02-075			
			Aromatic vols. (602)	86-02-075			
			Oil and Grease	86-02-079			
			Hydrocarbon Fuels	86-02-079			

(continued)

TABLE A. 1-4. (Continued)

Well or Soil Boring Number	OEHL Number	Date Sampled	Analyses Performed	RAS Work Order Number	Date Extracted	Date Analyzed	Comments
HM-66	860159	2/13/86	Hydrogenated vols. (601) Aromatic vols. (602) Oil and Grease	86-02-087 86-02-087 86-02-087			
HM-68	860209	2/28/86	Hydrocarbon Fuels Hydrogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-03-002 86-03-002 86-03-018 86-03-018 86-03-004 86-03-004	3/6/86 3/6/86	3/24/86 3/24/86	
HM-69	860187	2/21/86	Oil and Grease Hydrocarbon Fuels Hydrogenated vols. (601) Aromatic vols. (602) Metals	86-03-004 86-03-004 86-02-138 86-02-138 86-02-139			
HM-70	860179	2/19/86	Oil and Grease Hydrocarbon Fuels Hydrogenated vols. (601) Aromatic vols. (602) Metals	86-02-139 86-02-139 86-02-120 86-02-120 86-02-120			
HM-70	860180	2/19/86	Oil and Grease Hydrocarbon Fuels Purgeables (624) Hydrogenated vols. (601) Aromatic vols. (602) Metals	86-02-120 86-02-120 86-02-152 86-02-120 86-02-120 86-02-120			Duplicate of 860179
HM-71	860116	2/3/86	Oil and Grease Hydrocarbon Fuels Halogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-02-120 86-02-120 86-02-015 86-02-015 86-02-016 86-02-016 86-02-015	2/4/86 2/4/86	2/14/86 2/14/86	
HM-72	860168	2/14/86	Oil and Grease Hydrocarbon Fuels Oil and Grease	86-02-015 86-02-015 86-02-100			
HM-73	860199	2/26/86	Xylene Methyl ethyl ketone Oil and Grease	86-02-100 9/8/86 memo 86-02-176			
HM-74	860129	2/5/86	Xylene Methyl ethyl ketone Oil and Grease	86-02-176 9/8/86 memo 86-02-031			
HM-75	860173	2/18/86	Xylene Methyl ethyl ketone Oil and Grease	86-02-031 9/8/86 memo 86-02-113 9/8/86 memo			

TABLE A.1-4. (Continued)

Well or Soil Boring Number	OEHL Number	Date Sampled	Analyses Performed	RAS Work		
				Order Number	Date Extracted	Date Analyzed
HM-76	860160	2/13/86	Hydrogenated vols. (601) Aromatic vols. (602) Oil and Grease	86-02-087		
				86-02-087		
HM-77	860135	2/6/86	Hydrocarbon Fuels Halogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-02-087		
				86-02-041		
HM-78	860127	2/5/86	Oil and Grease Hydrocarbon Fuels Halogenated vols. (601) Aromatic vols. (602)	86-02-041		
				86-02-038	2/10/86	2/25/86
HM-79	860117	2/3/86	Hydrocarbon Fuels Halogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-02-038	2/10/86	2/25/86
				86-02-041		
HM-80	860128	2/5/86	Oil and Grease Hydrocarbon Fuels Halogenated vols. (601) Aromatic vols. (602)	86-02-100		
				86-02-100		
HM-81	860140	2/7/86	Hydrocarbon Fuels Halogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-02-031		
				86-02-031		
HM-82	860121	2/4/86	Oil and Grease Hydrocarbon Fuels Halogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-02-015	2/4/86	2/14/86
				86-02-015	2/4/86	2/14/86
HM-83	860258	8/21/86	Oil and Grease Hydrocarbon Fuels Halogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-02-015		
				86-02-015		
HM-84	860121	2/4/86	Oil and Grease Hydrocarbon Fuels Halogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-02-015	2/10/86	2/25/86
				86-02-015	2/10/86	2/25/86
HM-85	860258	8/21/86	Oil and Grease Hydrocarbon Fuels Halogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-02-015	2/6/86	2/16/86
				86-02-015	2/6/86	2/16/86
HM-86	860258	8/21/86	Oil and Grease Hydrocarbon Fuels Halogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-02-015		
				86-02-015		
HM-87	860258	8/21/86	Oil and Grease Hydrocarbon Fuels Halogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-02-015		
				86-02-015		
HM-88	860258	8/21/86	Oil and Grease Hydrocarbon Fuels Halogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-02-015		
				86-02-015		
HM-89	860258	8/21/86	Oil and Grease Hydrocarbon Fuels Halogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-02-015		
				86-02-015		
HM-90	860258	8/21/86	Oil and Grease Hydrocarbon Fuels Halogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-02-015		
				86-02-015		
HM-91	860258	8/21/86	Oil and Grease Hydrocarbon Fuels Halogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-02-015		
				86-02-015		
HM-92	860258	8/21/86	Oil and Grease Hydrocarbon Fuels Halogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-02-015		
				86-02-015		
HM-93	860258	8/21/86	Oil and Grease Hydrocarbon Fuels Halogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-02-015		
				86-02-015		
HM-94	860258	8/21/86	Oil and Grease Hydrocarbon Fuels Halogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-02-015		
				86-02-015		
HM-95	860258	8/21/86	Oil and Grease Hydrocarbon Fuels Halogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-02-015		
				86-02-015		
HM-96	860258	8/21/86	Oil and Grease Hydrocarbon Fuels Halogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-02-015		
				86-02-015		
HM-97	860258	8/21/86	Oil and Grease Hydrocarbon Fuels Halogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-02-015		
				86-02-015		
HM-98	860258	8/21/86	Oil and Grease Hydrocarbon Fuels Halogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-02-015		
				86-02-015		
HM-99	860258	8/21/86	Oil and Grease Hydrocarbon Fuels Halogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-02-015		
				86-02-015		
HM-100	860258	8/21/86	Oil and Grease Hydrocarbon Fuels Halogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-02-015		
				86-02-015		

TABLE A.1-4. (Continued)

Well or Soil Boring Number	OEHL Number	Date Sampled	Analyses Performed	RAS Work Order Number	Date Extracted	Date Analyzed	Comments
HM-84	860261	8/21/86	Hydrogenated vols. (601)	86-08-093			
			Aromatic vols. (602)	86-08-093			
			Pesticides & PCBs (608)	86-08-034			
			B/N & Acid Semi-vols. (625)	86-08-034			
			Metals	86-08-095			
			Oil and Grease	86-08-095			
			Hydrocarbon Fuels	86-08-095			
			Alpha	86-08-096			
			Beta	86-08-096			
			Gamma	86-08-096			
			Hydrogenated vols. (601)	86-08-093			
			Aromatic vols. (602)	86-08-093			
			Pesticides & PCBs (608)	86-08-034			
HM-85	860259	8/21/86	B/N & Acid Semi-vols. (625)	86-08-034			
			Metals	86-08-095			
			Oil and Grease	86-08-095			
			Hydrocarbon Fuels	86-08-095			
			Alpha	86-08-096			
			Beta	86-08-096			
			Gamma	86-08-096			
			Pesticides & PCBs (608)	86-08-034			
			B/N & Acid Semi-vols. (625)	86-08-034			
			Metals	86-08-095			
			Alpha	86-08-096			
			Beta	86-08-096			
			Gamma	86-08-096			
HM-100 HM-101	860226 860228	4/11/86 4/18/86	Hydrocarbon Fuels	86-04-084			
			Hydrogenated vols. (601)	86-04-164			
			Aromatic vols. (602)	86-04-164			
			Pesticides & PCBs (608)	86-04-135			
			B/N & Acid Semi-vols. (625)	86-04-135			
			Metals	86-04-164			
			Hydrogenated vols. (601)	86-04-069			
			Aromatic vols. (602)	86-04-069			
			Oil and Grease	86-04-069			
			Hydrocarbon Fuels	86-04-069			
			Hydrogenated vols. (601)	86-04-084			
			Aromatic vols. (602)	86-04-084			
			Chromium	86-04-084			
HM-102	860220	4/9/86	Hydrogenated vols. (601)	86-04-069			
			Aromatic vols. (602)	86-04-069			
			Oil and Grease	86-04-069			
			Hydrocarbon Fuels	86-04-069			
			Hydrogenated vols. (601)	86-04-084			
			Aromatic vols. (602)	86-04-084			
			Chromium	86-04-084			
			Hydrogenated vols. (601)	86-04-069			
			Aromatic vols. (602)	86-04-069			
			Oil and Grease	86-04-069			
			Hydrocarbon Fuels	86-04-069			
			Hydrogenated vols. (601)	86-04-084			
			Aromatic vols. (602)	86-04-084			
HM-103	860224	4/10/86	Hydrogenated vols. (601)	86-04-069			
			Aromatic vols. (602)	86-04-069			
			Oil and Grease	86-04-069			
			Hydrocarbon Fuels	86-04-069			
			Hydrogenated vols. (601)	86-04-084			
			Aromatic vols. (602)	86-04-084			
			Chromium	86-04-084			
			Hydrogenated vols. (601)	86-04-069			
			Aromatic vols. (602)	86-04-069			
			Oil and Grease	86-04-069			
			Hydrocarbon Fuels	86-04-069			
			Hydrogenated vols. (601)	86-04-084			
			Aromatic vols. (602)	86-04-084			

(continued)

TABLE A. 1-4. (Continued)

Well or Soil Boring Number	OEH Number	Date Sampled	Analyses Performed	RAS Work			Comments
				Order Number	Date Extracted	Date Analyzed	
HM-104	860222	4/10/86	Hydrogenated vols. (601)	86-04-084			
			Aromatic vols. (602)	86-04-084			
			Metals	86-04-084			
			Oil and Grease	86-04-084			
HM-105	860230	8/19/86	Hydrocarbon Fuels	86-04-084			
			Oil and Grease	86-08-078			
HM-107	860229	4/19/86	Hydrocarbon Fuels	86-08-078			
			Oil and Grease	86-08-078			
HM-108	860256	8/20/86	Hydrocarbon Fuels	86-08-094			
			Oil and Grease	86-08-094			
P-1	860126	2/6/86	Hydrocarbon Fuels	86-02-041			
			Halogenated vols. (601)	86-02-041			
			Aromatic vols. (602)	86-02-041			
			Pesticides & PCBs (608)	86-02-038	2/10/86	2/24/86	
P-2	860175	2/19/86	B/N & Acid Semi-vols. (625)	86-02-038	2/10/86	2/24/86	
			Metals	86-02-041			
			Hydrogenated vols. (601)	86-02-120			
			Aromatic vols. (602)	86-02-120			
P-3	860123	2/4/86	Pesticides & PCBs (608)	86-02-122	2/20/86	3/6/86	
			B/N & Acid Semi-vols. (625)	86-02-122	2/20/86	3/6/86	
			Metals	86-02-120			
			Halogenated vols. (601)	86-02-019			
P-4	860108	1/30/86	Aromatic vols. (602)	86-02-019			
			Pesticides & PCBs (608)	86-02-030	2/6/86	2/16/86	
			B/N & Acid Semi-vols. (625)	86-02-030	2/6/86	2/16/86	
			Oil and Grease	86-02-019			
P-5u	860111	1/31/86	Hydrocarbon Fuels	86-02-019			
			Halogenated vols. (601)	86-01-239			
			Aromatic vols. (602)	86-01-239			
			Pesticides & PCBs (608)	86-01-242	1/31/86	2/11/86	
P-5m	860110	1/31/86	B/N & Acid Semi-vols. (625)	86-01-242	1/31/86	2/11/86	
			Halogenated vols. (601)	86-02-001			
			Aromatic vols. (602)	86-02-001			
			Pesticides & PCBs (608)	86-02-004	2/3/86	2/11/86	
P6u	860122	2/5/86	B/N & Acid Semi-vols. (625)	86-02-004	2/3/86	2/11/86	
			Metals	86-02-001			
			Oil and Grease	86-02-001			
			Hydrocarbon Fuels	86-02-001			

(continued)

TABLE A.1-4. (Continued)

Well or Soil Boring Number	OEHL Number	Date Sampled	Analyses Performed	RAS Work Order Number	Date Extracted	Date Analyzed	Comments
P-6m	860118	2/4/86	Hydrocarbon Fuels	86-02-123			
			Oil and Grease	86-02-019			
P-7u	860104	1/30/86	Halogenated vols. (601)	86-01-239			
			Aromatic vols. (602)	86-01-239			
			Pesticides & PCBs (608)	86-01-242	1/31/86	2/11/86	
			B/N & Acid Semi-vols. (625)	86-01-242	1/31/86	2/11/86	
			Metals	86-01-240			
P-7m	860103	1/30/86	Halogenated vols. (601)	86-01-239			
			Aromatic vols. (602)	86-01-239			
			Pesticides & PCBs (608)	86-01-242	1/31/86	2/7/86	
			B/N & Acid Semi-vols. (625)	86-01-242	1/31/86	2/7/86	
			Metals	86-01-240			
P-8u	860136	2/7/86	Halogenated vols. (601)	86-02-047			
			Aromatic vols. (602)	86-02-047			
			Pesticides & PCBs (608)	86-02-044	2/10/86	2/25/86	
			B/N & Acid Semi-vols. (625)	86-02-044	2/10/86	2/24/86	
			Metals	86-02-047			
			Oil and Grease	86-02-047			
P-8m	860120	2/4/86	Hydrocarbon Fuels	86-02-047			
			Halogenated vols. (601)	86-02-019			
			Aromatic vols. (602)	86-02-019			
			Pesticides & PCBs (608)	86-02-030	2/6/86	2/16/86	
			B/N & Acid Semi-vols. (625)	86-02-030	2/6/86	2/16/86	
			Metals	86-02-019			
			Oil and Grease	86-02-019			
P-9u	860125	2/5/86	Hydrocarbon Fuels	86-02-019			
			Halogenated vols. (601)	86-02-031			
			Aromatic vols. (602)	86-02-031			
			Pesticides & PCBs (608)	86-02-030	2/6/86	2/16/86	
			B/N & Acid Semi-vols. (625)	86-02-030	2/6/86	2/16/86	
			Metals	86-02-031			
			Oil and Grease	86-02-031			
P-9m	860124	2/5/86	Hydrocarbon Fuels	86-02-031			
			Halogenated vols. (601)	86-02-031			
			Aromatic vols. (602)	86-02-031			
			Pesticides & PCBs (608)	86-02-030	2/6/86	2/16/86	
			B/N & Acid Semi-vols. (625)	86-02-030	2/6/86	2/16/86	
			Metals	86-02-031			
			Oil and Grease	86-02-031			
P-10u	860169	2/14/86	Hydrocarbon Fuels	86-01-240			
			Halogenated vols. (601)	86-02-113			
			Aromatic vols. (602)	86-02-113			
			Pesticides & PCBs (608)	86-02-116	2/24/86	3/6/86	
			B/N & Acid Semi-vols. (625)	86-02-116	2/24/86	3/6/86	
			Metals	86-02-113			
			Oil and Grease	86-02-113			
			Hydrocarbon Fuels	86-02-113			



TABLE A.1-4. (Continued)

Well or Soil Boring Number	ORHL Number	Date Sampled	Analyses Performed	RAS Work Order Number	Date Extracted	Date Analyzed	Comments
P-10u	860172	2/18/86	Hydrogenated vols. (601)	86-02-113			Duplicate of 860169
			Aromatic vols. (602)	86-02-113			
			Pesticides & PCBs (608)	86-02-116	2/20/86	3/7/86	
			B/N & Acid Semi-vols. (625)	86-02-116	2/20/86	3/7/86	
			Metals	86-02-113			
P-10m	860170	2/18/86	Oil and Grease	86-02-113			
			Hydrocarbon Fuels	86-02-113			
			Hydrogenated vols. (601)	86-02-113			
			Aromatic vols. (602)	86-02-113			
			Pesticides & PCBs (608)	86-02-116	2/24/86	3/4/86	
P-10m	860171	2/18/86	B/N & Acid Semi-vols. (625)	86-02-116	2/24/86	3/6/86	Duplicate of 860170
			Metals	86-02-113			
			Oil and Grease	86-02-113			
			Hydrocarbon Fuels	86-02-113			
			Hydrogenated vols. (601)	86-02-113			
P-11u	860210	2/28/86	Aromatic vols. (602)	86-02-113			
			Pesticides & PCBs (608)	86-03-002			
			B/N & Acid Semi-vols. (625)	86-03-002	3/6/86	3/24/86	
			Metals	86-03-018	3/6/86	3/24/86	
			Oil and Grease	86-03-004			
P-11m	860212	2/28/86	Hydrocarbon Fuels	86-03-004			
			Hydrogenated vols. (601)	86-03-004			
			Aromatic vols. (602)	86-03-002			
			Pesticides & PCBs (608)	86-03-018	3/6/86	3/24/86	
			B/N & Acid Semi-vols. (625)	86-03-018	3/6/86	3/24/86	
P-11m	860211	2/28/86	Metals	86-03-004			Duplicate of 860212
			Oil and Grease	86-03-004			
			Hydrocarbon Fuels	86-03-004			
			Hydrogenated vols. (601)	86-03-002			
			Aromatic vols. (602)	86-03-002			
P-12u	860213	3/1/86	Pesticides & PCBs (608)	86-03-018	3/6/86	3/24/86	
			B/N & Acid Semi-vols. (625)	86-03-018	3/6/86	3/24/86	
			Metals	86-03-004			
			Oil and Grease	86-03-004			
			Hydrocarbon Fuels	86-03-004			
P-12u	860213	3/1/86	Hydrogenated vols. (601)	86-03-003			
			Aromatic vols. (602)	86-03-003			
			Pesticides & PCBs (608)	86-03-021	3/5/86	3/24/86	
			B/N & Acid Semi-vols. (625)	86-03-021	3/5/86	3/24/86	
			Metals	86-03-004			
P-12u	860213	3/1/86	Oil and Grease	86-03-004			
			Hydrocarbon Fuels	86-03-004			
			Hydrogenated vols. (601)	86-03-003			
			Aromatic vols. (602)	86-03-003			
			Pesticides & PCBs (608)	86-03-021	3/5/86	3/24/86	
P-12u	860213	3/1/86	B/N & Acid Semi-vols. (625)	86-03-021	3/5/86	3/24/86	
			Metals	86-03-004			
			Oil and Grease	86-03-004			
			Hydrocarbon Fuels	86-03-004			
			Hydrogenated vols. (601)	86-03-003			

TABLE A.1-4. (Continued)

Well or Soil Boring Number	OEHL Number	Date Sampled	Analyses Performed	RAS Work Order Number	Date Extracted	Date Analyzed	Comments
P-12m	860214	3/1/86	Hydrogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-03-003 86-03-003 86-03-021 86-03-021 86-03-004	3/5/86 3/5/86	3/24/86 3/24/86	
P-12m	860215	3/1/86	Oil and Grease Hydrocarbon Fuels Hydrogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-03-004 86-03-004 86-03-003 86-03-003 86-03-021 86-03-021 86-03-004			Duplicate of 860214
P-20m	860218	4/9/86	Oil and Grease Hydrocarbon Fuels Hydrogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-03-004 86-03-004 86-04-069 86-04-069 86-04-070 86-04-070 86-04-069	4/10/86 4/10/86	4/23/86 4/23/86	
P-20m	860219	4/9/86	Hydrogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-04-069 86-04-069 86-04-070 86-04-070 86-04-069	4/10/86 4/10/86	4/23/86 4/23/86	Duplicate of 860218
P-21u	860221	4/10/86	Hydrogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-04-084 86-04-084 86-04-085 86-04-085 86-04-084	4/14/86 4/14/86	4/24/86 4/24/86	
P-22u	860223	4/10/86	Hydrogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-04-084 86-04-084 86-04-085 86-04-085 86-04-084	4/14/86 4/14/86	4/22/86 4/22/86	
P-23u	860225	4/8/86	Hydrogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-04-164 86-04-164 86-04-135 86-04-135 86-04-164	4/23/86 4/23/86	4/28/86 4/28/86	
P-23u	860257	8/21/86	Hydrogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-08-093 86-08-093 86-08-034 86-08-034 86-08-095			
C-1	860100	1/29/86	Halogenated vols. (601) Aromatic vols. (602) Pesticides & PCBs (608) B/N & Acid Semi-vols. (625) Metals	86-01-239 86-01-239 86-01-242 86-01-242 86-01-240	1/31/86 1/31/86	2/7/86 2/7/86	

TABLE A. 1-4. (Continued)

Well or Soil Boring Number	OEHL Number	Date Sampled	Analyses Performed	BAS Work Order Number	Date Extracted	Date Analyzed	Comments
C-2	860102	1/29/86	Halogenated vols. (601)	86-01-239			
			Aromatic vols. (602)	86-01-239			
			Pesticides & PCBs (608)	86-01-242	1/31/86	2/7/86	
			B/N & Acid Semi-vols. (625)	86-01-242	1/31/86	2/7/86	
C-3	860105	1/30/86	Metals	86-01-240			
			Halogenated vols. (601)	86-01-239			
			Aromatic vols. (602)	86-01-239			
			Pesticides & PCBs (608)	86-01-242	1/31/86	2/11/86	
C-4	860107	1/30/86	B/N & Acid Semi-vols. (625)	86-01-242	1/31/86	2/11/86	
			Metals	86-01-240			
			Halogenated vols. (601)	86-01-239			
			Aromatic vols. (602)	86-01-239			
C-5	860101	1/29/86	Pesticides & PCBs (608)	86-01-242	1/31/86		
			B/N & Acid Semi-vols. (625)	86-01-242	1/31/86		
			Metals	86-01-240			
			Halogenated vols. (601)	86-01-239			
Creek Seep	860106	1/30/86	Aromatic vols. (602)	86-01-239	1/31/86	2/7/86	
			Pesticides & PCBs (608)	86-01-242	1/31/86	2/7/86	
			B/N & Acid Semi-vols. (625)	86-01-242			
			Metals	86-01-240			
Drain Pipe	860153	2/12/86	Halogenated vols. (601)	86-01-239	1/31/86	2/7/86	
			Aromatic vols. (602)	86-01-239	1/31/86	2/7/86	
			Pesticides & PCBs (608)	86-01-242			
			B/N & Acid Semi-vols. (625)	86-01-242			
French Drain 1	860154	2/12/86	Metals	86-01-240			
			Hydrogenated vols. (601)	86-02-075			
			Aromatic vols. (602)	86-02-075	2/13/86	2/27/86	
			Pesticides & PCBs (608)	86-02-078	2/13/86	2/27/86	
French Drain 2	860155	2/12/86	B/N & Acid Semi-vols. (625)	86-02-078			
			Metals	86-02-079			
			Hydrogenated vols. (601)	86-02-075			
			Aromatic vols. (602)	86-02-075			
Outfall #1	860246	8/20/86	Pesticides & PCBs (608)	86-02-078	2/13/86	2/28/86	
			B/N & Acid Semi-vols. (625)	86-02-078	2/13/86	2/28/86	
			Metals	86-02-079			
			Hydrogenated vols. (601)	86-02-085			(1030)
Outfall #1	860247	8/20/86	Aromatic vols. (602)	86-02-075	2/13/86	2/28/86	
			Pesticides & PCBs (608)	86-02-078	2/13/86	2/28/86	
			B/N & Acid Semi-vols. (625)	86-02-078			
			Metals	86-02-079			(1130)

TABLE A. 1-4. (Continued)

Well or Soil Boring Number	ORNL Number	Date Sampled	Analyses Performed	RAS Work Order Number	Date Extracted	Date Analyzed	Comments
Outfall #1	860248	8/20/86	Hydrogenated vols. (601) Aromatic vols. (602) Oil and Grease	86-08-092 86-08-092 86-08-094		(1230)	
Outfall #1	860249	8/20/86	Hydrocarbon Fuels Hydrogenated vols. (601) Aromatic vols. (602) Oil and Grease	86-08-094 86-08-092 86-08-092 86-08-094		(1330)	
Outfall #1	860250	8/20/86	Hydrocarbon Fuels Oil and Grease	86-08-094 86-08-094			
Outfall #1	860251	8/20/86	Hydrocarbon Fuels Oil and Grease Hydrogenated vols. (601) Aromatic vols. (602) Oil and Grease	86-08-094 86-08-094 86-08-092 86-08-092 86-08-094		(1530)	
Outfall #1	860252	8/20/86	Hydrocarbon Fuels Hydrogenated vols. (601) Aromatic vols. (602) Oil and Grease	86-08-094 86-08-092 86-08-092 86-08-094		(1630)	
Outfall #1	860253	8/20/86	Hydrocarbon Fuels Hydrogenated vols. (601) Aromatic vols. (602) Oil and Grease	86-08-094 86-08-092 86-08-092 86-08-094		(1730)	
Outfall #1	860254	8/20/86	Hydrocarbon Fuels Hydrogenated vols. (601) Aromatic vols. (602) Oil and Grease	86-08-094 86-08-092 86-08-092 86-08-094		Composite (1030-1730)	
Outfall #1	860255	8/20/86	Hydrocarbon Fuels Hydrogenated vols. (601) Aromatic vols. (602) Oil and Grease	86-08-094 86-08-092 86-08-092 86-08-094		(1730) Duplicate of 860254	
Outfall #5	860237	8/20/86	Hydrocarbon Fuels Oil and Grease	86-08-094 86-08-094		(0930)	
Outfall #5	860238	8/20/86	Hydrocarbon Fuels Oil and Grease	86-08-094 86-08-094		(Composite 0930-0530)	
Outfall #5	860239	8/20/86	Hydrocarbon Fuels Oil and Grease	86-08-094 86-08-094		(1130)	
Outfall #5	860240	8/20/86	Hydrocarbon Fuels Oil and Grease	86-08-094 86-08-094		(1230)	
Outfall #5	860241	8/20/86	Hydrocarbon Fuels Oil and Grease	86-08-094 86-08-094		(1330)	
Outfall #5	860242	8/20/86	Hydrocarbon Fuels Oil and Grease	86-08-094 86-08-094		(1430)	
Outfall #5	860243	8/20/86	Hydrocarbon Fuels Oil and Grease	86-08-094 86-08-094		(1530)	
Outfall #5	860244	8/20/86	Hydrocarbon Fuels Oil and Grease	86-08-094 86-08-094		(1630)	
Outfall #5	860245	8/20/86	Hydrocarbon Fuels Oil and Grease	86-08-094 86-08-094		(1730)	

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Analytical Serv

REPORT

LAB # 86-02-067

02/27/86 18:15:31

REPORT Radian  
TO BL 4  
Austin

ATTEN Larry French

CLIENT PLANT 4 SAMPLES 6  
COMPANY Plant 4  
FACILITY Carswell AFB (Gen. Dynamics)

WORK ID groundwater

TAKEN NR  
TRANS Fed Ex  
TYPE

P.O. # 212-027-27-40

INVOICE under separate cover

PREPARED Radian Analytical Services

BY 8501 MoPac Blvd.

P.O. Box 9948

Austin, Texas 78766

ATTEN

PHONE (512) 454-4797

CERTIFIED BY

CONTACT CONOVER

*Carl Smith*

Unknown compound eluting here.

Second column confirmation performed for EPA 601: -01, -02, -03, -05; for EPA 602: -02, -05.

Footnotes and Comments

\* Indicates a value less than 5 times the detection limit. Potential error for such low values ranges between 50 and 100%.

@ Indicates that spike recovery for this analysis on the specific matrix was not within acceptable limits indicating an interferent present.

SAMPLE IDENTIFICATION

01 860147  
02 860148  
03 860149  
04 860150  
05 860151  
06 trip blank

Analytical Serv TEST CODES and NAMES used on this report

AG E	Silver, ICPEs
AS GA	Arsenic, low level
BA E	Barium, ICPEs
CD E	Cadmium, ICPEs
CR E	Chromium, ICPEs
DG3020	Digestion by Method 3020
DG6010	Digestion by Method 6010
GC 601	EPA Method 601/GC
GC 602	EPA Method 602/GC
HC IR	Hydrocarbons in soil
HG CA	Mercury, Cold Vapor
ONG IR	Oil and Grease, Infrared
PB GA	Lead, low level
SE GA	Selenium, low level

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RESULTS BY TEST  
REPORT  
LAB # 86-02-067

TEST CODE	Sample 01 (entered units)	Sample 02 (entered units)	Sample 03 (entered units)	Sample 04 (entered units)	Sample 05 (entered units)
AG_E ug/ml	<.002	<.002	<.002	<.002	
AS_GA ug/ml	0.038	0.14	<.002E	0.008*	
BA_E ug/ml	0.12	0.47	0.034	0.14	
CD_E ug/ml	<.002	<.002	0.002*	0.002*	
CR_E ug/ml	0.21	<.005	<.005	0.013*	
DG3020 date complete	02/14/86	02/14/86	02/14/86	02/14/86	
DG6010 date complete	02/14/86	02/14/86	02/14/86	02/14/86	
HC_IR ug/g	<.0002	<.0002	0.0003*	<.0002	11.0 mg/L
HG_GA ug/ml					17.0
ONG_IR mg/L					
PB_GA ug/ml	0.10	0.035	0.020	0.037E	
SE_GA ug/ml	0.007*	<.002	<.002	<.002E	

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Analytical Serv  
Results by Sample

LAB # 86-02-067

SAMPLE ID 860147

FRACTION 01A

TEST CODE GC 601

NAME EPA Method 601/GC

Date & Time Collected 02/11/86

Category

DATA FILE \_\_\_\_\_ B \_\_\_\_\_ DATE INJECTED 02/13/86

CONC. FACTOR \_\_\_\_\_

ANALYST \_\_\_\_\_  
INSTRUMENT \_\_\_\_\_

VERIFIED BY MCL  
COMPOUNDS DETECTED 1

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
_____	Chloromethane	ND	1	Trichloroethene	10290
_____	Bromomethane	ND	_____	Dibromochloromethane *	ND
_____	Vinyl Chloride	ND	_____	1,1,2-Trichloroethane *	ND
_____	Chloroethane	ND	_____	cis-1,3-Dichloropropene *	ND
_____	Methylene Chloride	ND	_____	2-Chloroethylvinyl Ether	ND
_____	Trichlorofluoromethane	ND	_____	Bromoform	ND
_____	1,1-Dichloroethene	ND	_____	1,1,2,2-Tetrachloroethane #	ND
_____	1,1-Dichloroethane	ND	_____	Tetrachloroethylene #	ND
_____	trans-1,2-Dichloroethene	ND	_____	Chlorobenzene	ND
_____	Chloroform	ND	_____	1,3-Dichlorobenzene	ND
_____	1,2-Dichloroethane	ND	_____	1,2-Dichlorobenzene	ND
_____	1,1,1-Trichloroethane	ND	_____	1,4-Dichlorobenzene	ND
_____	Carbon Tetrachloride	ND			
_____	Bromodichloromethane	ND			
_____	1,2-Dichloropropane	ND			
_____	trans-1,3-Dichloropropene	ND			

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 SAMPLE ID 860147  
 Analytical Serv  
 Results by Sample  
 REPORT  
 LAB # 86-02-067  
 Continued From Above  
 FRACTION 01A TEST CODE GC 601 NAME EPA Method 601/GC  
 Date & Time Collected 02/11/86 Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.  
 All results reported in ug/L unless otherwise specified.  
 ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79).  
 \*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.  
 #1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.



# LABORATORY CORPORATION

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Analytical Serv

REPORT

LAB # 86-02-067

Results by Sample

SAMPLE ID 860147

FRACTION 01C

TEST CODE GC 602

NAME EPA Method 602/GC

Date & Time Collected 02/11/86

Category

DATA FILE D  
CONC. FACTOR       

DATE INJECTED 02/12/86

ANALYST RP  
INSTRUMENT d

VERIFIED BY MCL  
COMPOUNDS DETECTED 0

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
<u>      </u>	Benzene	<u>ND</u> ;	<u>      </u>	1,4-Dichlorobenzene	<u>ND</u>
<u>      </u>	Toluene	<u>ND</u> ;	<u>      </u>	1,3-Dichlorobenzene	<u>ND</u>
<u>      </u>	Ethyl Benzene	<u>ND</u> ;	<u>      </u>	1,2-Dichlorobenzene	<u>ND</u>
<u>      </u>	Chlorobenzene	<u>ND</u> ;			

## NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

All results reported in        ug/L unless otherwise specified.

ND = not detected at EPA detection limit method 602, (Federal Register, 12/3/79).

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REPORT

Results by Sample

LAB # 86-02-067

SAMPLE ID 860148

FRACTION 02A

TEST CODE GC 601

NAME EPA Method 601/GC

Date & Time Collected 02/11/86

Category

DATA FILE	B	DATE INJECTED	02/14/86	ANALYST	MCL	VERIFIED BY	MCL
CONC. FACTOR				INSTRUMENT	b	COMPOUNDS DETECTED	6
SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT		
	Chloromethane	ND		Trichloroethene	ND		
	Bromomethane	ND		Dibromochloromethane	*	ND	
1	Vinyl Chloride	16.1		1,1,2-Trichloroethane	*	ND	
	Chloroethane	ND		cis-1,3-Dichloropropene	*	ND	
	Methylene Chloride	ND		2-Chloroethylvinyl Ether	ND	ND	
	Trichlorofluoromethane	ND		Bromoform	ND	ND	
	1,1-Dichloroethene	ND		1,1,2,2-Tetrachloroethane	#	ND	
	1,1-Dichloroethane	ND		Tetrachloroethylene	#	ND	
2	trans-1,2-Dichloroethene	90.7	4	Chlorobenzene	4716		
	Chloroform	ND		1,3-Dichlorobenzene	ND		
	1,2-Dichloroethane	ND	5	1,2-Dichlorobenzene	194		
	1,1,1-Trichloroethane	ND	6	1,4-Dichlorobenzene	868		
	Carbon Tetrachloride	ND					
	Bromodichloromethane	ND					
3	1,2-Dichloropropane	12.7					
	trans-1,3-Dichloropropene	ND					

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 Analytical Serv Results by Sample  
 REPORT  
 LAB # 86-02-067  
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 FRACTION 02A TEST CODE GC 601 NAME EPA Method 601/GC  
 Date & Time Collected 02/11/86 Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.  
 All results reported in ug/L unless otherwise specified.  
 ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79).  
 \*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.  
 #1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

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Results by Sample

SAMPLE ID 860148

FRACTION 02C TEST CODE GC 602 NAME EPA Method 602/GC  
Date & Time Collected 02/11/86 Category

DATA FILE \_\_\_\_\_ D DATE INJECTED 02/12/86  
CONC. FACTOR \_\_\_\_\_

ANALYST \_\_\_\_\_ RP VERIFIED BY MCL  
INSTRUMENT \_\_\_\_\_ d COMPOUNDS DETECTED 4

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
1	Benzene	468	3	1,4-Dichlorobenzene	732
	Toluene	ND		1,3-Dichlorobenzene	ND
	Ethyl Benzene	ND	4	1,2-Dichlorobenzene	371
2	Chlorobenzene	8781			

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.  
All results reported in ug/L unless otherwise specified  
ND = not detected at EPA detection limit method 602, (Federal Register, 12/3/79).

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-067

SAMPLE ID 860149

FRACTION 03A

TEST CODE GC 601

NAME EPA Method 601/GC

Date & Time Collected 02/11/86

Category

DATA FILE \_\_\_\_\_ B DATE INJECTED 02/13/86

CONC. FACTOR \_\_\_\_\_

ANALYST \_\_\_\_\_  
INSTRUMENT \_\_\_\_\_

VERIFIED BY MCL  
COMPOUNDS DETECTED 1

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
_____	Chloromethane	ND	1	Trichloroethene	15274
_____	Bromomethane	ND	_____	Dibromochloromethane *	ND
_____	Vinyl Chloride	ND	_____	1,1,2-Trichloroethane *	ND
_____	Chloroethane	ND	_____	cis-1,3-Dichloropropene *	ND
_____	Methylene Chloride	ND	_____	2-Chloroethylvinyl Ether	ND
_____	Trichlorofluoromethane	ND	_____	Bromoform	ND
_____	1,1-Dichloroethene	ND	_____	1,1,2,2-Tetrachloroethane #	ND
_____	1,1-Dichloroethane	ND	_____	Tetrachloroethylene #	ND
_____	trans-1,2-Dichloroethene	ND	_____	Chlorobenzene	ND
_____	Chloroform	ND	_____	1,3-Dichlorobenzene	ND
_____	1,2-Dichloroethane	ND	_____	1,2-Dichlorobenzene	ND
_____	1,1,1-Trichloroethane	ND	_____	1,4-Dichlorobenzene	ND
_____	Carbon Tetrachloride	ND			
_____	Bromodichloromethane	ND			
_____	1,2-Dichloropropane	ND			
_____	trans-1,3-Dichloropropene	ND			

**IRVING-CLOUD**  
CORPORATION

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SAMPLE ID 860149

Analytical Serv  
Results by Sample

REPORT  
LAB # 86-02-067  
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FRACTION Q3A TEST CODE GC 601 NAME EPA Method 601/GC  
Date & Time Collected 02/11/86 Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.  
All results reported in ug/L unless otherwise specified.  
ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79).  
\*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.  
#1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

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Results by Sample

LAB # 86-02-067

SAMPLE ID 860149

FRACTION 03C

TEST CODE GC 602

NAME EPA Method 602/GC

Date & Time Collected 02/11/86

Category

DATA FILE \_\_\_\_\_ D \_\_\_\_\_ DATE INJECTED 02/12/86 ANALYST \_\_\_\_\_ RP \_\_\_\_\_ VERIFIED BY MCL  
CONC. FACTOR \_\_\_\_\_ INSTRUMENT \_\_\_\_\_ d \_\_\_\_\_ COMPOUNDS DETECTED 0

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
_____	Benzene	ND ;	_____	1,4-Dichlorobenzene	ND
_____	Toluene	ND ;	_____	1,3-Dichlorobenzene	ND
_____	Ethyl Benzene	ND ;	_____	1,2-Dichlorobenzene	ND
_____	Chlorobenzene	ND ;			

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

All results reported in ug/L unless otherwise specified

ND = not detected at EPA detection limit method 602, (Federal Register, 12/3/79).

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Results by Sample

LAB # 86-02-067

SAMPLE ID 860150

FRACTION 04A

TEST CODE GC 601

NAME EPA Method 601/GC

Date & Time Collected 02/11/86

Category

DATA FILE \_\_\_\_\_ B \_\_\_\_\_ DATE INJECTED 02/14/86

CONC. FACTOR \_\_\_\_\_ ANALYST \_\_\_\_\_ MCL \_\_\_\_\_ VERIFIED BY MCL \_\_\_\_\_

INSTRUMENT \_\_\_\_\_ b \_\_\_\_\_ COMPOUNDS DETECTED 0

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
_____	Chloromethane	ND	_____	Trichloroethene	ND
_____	Bromomethane	ND	_____	Dibromochloromethane *	ND
_____	Vinyl Chloride	ND	_____	1,1,2-Trichloroethane *	ND
_____	Chloroethane	ND	_____	cis-1,3-Dichloropropene *	ND
_____	Methylene Chloride	ND	_____	2-Chloroethylvinyl Ether	ND
_____	Trichlorofluoromethane	ND	_____	Bromoform	ND
_____	1,1-Dichloroethene	ND	_____	1,1,2,2-Tetrachloroethane #	ND
_____	1,1-Dichloroethane	ND	_____	Tetrachloroethylene #	ND
_____	trans-1,2-Dichloroethene	ND	_____	Chlorobenzene	ND
_____	Chloroform	ND	_____	1,3-Dichlorobenzene	ND
_____	1,2-Dichloroethane	ND	_____	1,2-Dichlorobenzene	ND
_____	1,1,1-Trichloroethane	ND	_____	1,4-Dichlorobenzene	ND
_____	Carbon Tetrachloride	ND			
_____	Bromodichloromethane	ND			
_____	1,2-Dichloropropane	ND			
_____	trans-1,3-Dichloropropene	ND			



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 SAMPLE ID 860150  
 Analytical Serv  
 Results by Sample  
 FRACTION 04A  
 TEST CODE GC 601  
 NAME EPA Method 601/GC  
 Date & Time Collected 02/11/86  
 LAB # 86-02-067  
 Continued From Above  
 Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.  
 All results reported in ug/L unless otherwise specified.  
 ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79).  
 \*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.  
 #1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

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Analytical Serv  
Results by Sample

LAB # 86-02-067

SAMPLE ID 860150

FRACTION 04C TEST CODE GC 602 NAME EPA Method 602/GC

Date & Time Collected 02/11/86

Category

DATA FILE \_\_\_\_\_ D \_\_\_\_\_ DATE INJECTED 02/12/86  
CONC. FACTOR \_\_\_\_\_

ANALYST \_\_\_\_\_ RP \_\_\_\_\_ VERIFIED BY MCL  
INSTRUMENT \_\_\_\_\_ d \_\_\_\_\_ COMPOUNDS DETECTED 1

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
_____	Benzene	ND :	_____	1,4-Dichlorobenzene	ND
1	Toluene	0.59 :	_____	1,3-Dichlorobenzene	ND
_____	Ethyl Benzene	ND :	_____	1,2-Dichlorobenzene	ND
_____	Chlorobenzene	ND :	_____		

3 014

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.  
All results reported in ug/L unless otherwise specified.  
ND = not detected at EPA detection limit method 602, (Federal Register, 12/3/79).

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Analytical Serv  
Results by Sample

LAB # 86-02-067

SAMPLE ID 860151

FRACTION 05A TEST CODE GC 601 NAME EPA Method 601/GC

Date & Time Collected 02/11/86

Category

DATA FILE	CONC	FACTOR	DATE INJECTED	ANALYST	INSTRUMENT	RP	COMPOUNDS DETECTED	VERIFIED BY
							4	MCL
SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT			
	Chloromethane	ND	4	Trichloroethene	415675			
	Bromomethane	ND		Dibromochloromethane *	ND			
	Vinyl Chloride	ND		1,1,2-Trichloroethane *	ND			
	Chloroethane	ND		cis-1,3-Dichloropropene *	ND			
1	Methylene Chloride	203610		2-Chloroethylvinyl Ether	ND			
	Trichlorofluoromethane	ND		Bromoform	ND			
	1,1-Dichloroethene	ND		1,1,2,2-Tetrachloroethane #	ND			
	1,1-Dichloroethane	ND		Tetrachloroethylene #	ND			
2	trans-1,2-Dichloroethene	32300		Chlorobenzene	ND			
	Chloroform	ND		1,3-Dichlorobenzene	ND			
3	1,2-Dichloroethane	27368		1,2-Dichlorobenzene	ND			
	1,1,1-Trichloroethane	ND		1,4-Dichlorobenzene	ND			
	Carbon Tetrachloride	ND						
	Bromodichloromethane	ND						
	1,2-Dichloropropane	ND						
	trans-1,3-Dichloropropene	ND						

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SAMPLE ID 860151

Analytical Serv  
Results by Sample

REPORT  
LAB # 86-02-067  
Continued From Above

FRACTION 05A TEST CODE GC 601 NAME EPA Method 601/GC  
Date & Time Collected 02/11/86 Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.  
All results reported in ug/L unless otherwise specified.  
ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79).  
\*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.  
#1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

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Analytical Serv

REPORT

LAB # 86-02-067

Results by Sample

SAMPLE ID 860151

FRACTION 05C

TEST CODE GC 602

NAME EPA Method 602/GC

Date & Time Collected 02/11/86

Category

DATA FILE \_\_\_\_\_ D \_\_\_\_\_ DATE INJECTED 02/13/86 ANALYST \_\_\_\_\_ MCL \_\_\_\_\_ VERIFIED BY MCL  
CONC. FACTOR \_\_\_\_\_ INSTRUMENT \_\_\_\_\_ d \_\_\_\_\_ COMPOUNDS DETECTED 1

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
—	Benzene	ND	—	1,4-Dichlorobenzene	ND
1	Toluene	96371	—	1,3-Dichlorobenzene	ND
—	Ethyl Benzene	ND	—	1,2-Dichlorobenzene	ND
—	Chlorobenzene	ND	—		

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.  
All results reported in ug/L unless otherwise specified.  
ND = not detected at EPA detection limit method 602, (Federal Register, 12/3/79).

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Analytical Serv  
Results by Sample

LAB # 86-02-067

SAMPLE ID trip blank

FRACTION 06A

TEST CODE GC 601 NAME EPA Method 601/GC

Date & Time Collected not specified

Category

DATA FILE	CONC. FACTOR	G	DATE INJECTED	02/13/86	ANALYST	RP	VERIFIED BY	MCL
					INSTRUMENT	g	COMPOUNDS DETECTED	2
SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT			
	Chloromethane	ND	2	Trichloroethene	0.30			
	Bromomethane	ND		Dibromochloromethane *	ND			
	Vinyl Chloride	ND		1,1,2-Trichloroethane *	ND			
	Chloroethane	ND		cis-1,3-Dichloropropene *	ND			
	Methylene Chloride	ND		2-Chloroethylvinyl Ether	ND			
1	Trichlorofluoromethane	2.03		Bromoform	ND			
	1,1-Dichloroethene	ND		1,1,2,2-Tetrachloroethane #	ND			
	1,1-Dichloroethane	ND		Tetrachloroethylene #	ND			
	trans-1,2-Dichloroethene	ND		Chlorobenzene	ND			
	Chloroform	ND		1,3-Dichlorobenzene	ND			
	1,2-Dichloroethane	ND		1,2-Dichlorobenzene	ND			
	1,1,1-Trichloroethane	ND		1,4-Dichlorobenzene	ND			
	Carbon Tetrachloride	ND						
	Bromodichloromethane	ND						
	1,2-Dichloropropane	ND						
	trans-1,3-Dichloropropene	ND						

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 SAMPLE ID trip blank  
 Analytical Serv Results by Sample REPORT  
 LAB # 86-02-067  
 Continued From Above  
 FRACTION 06A TEST CODE GC 601 NAME EPA Method 601/GC  
 Date & Time Collected not specified Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.  
 All results reported in ug/L unless otherwise specified.  
 ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79).  
 \*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.  
 #1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-067

SAMPLE ID trip blank

FRACTION 06A

TEST CODE GC 602 NAME EPA Method 602/GC

Date & Time Collected not specified

Category

DATA FILE D  
CONC. FACTOR       

DATE INJECTED 02/13/86

ANALYST        MCL         
INSTRUMENT d

VERIFIED BY MCL         
COMPOUNDS DETECTED 1

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
<u>      </u>	Benzene	<u>ND</u> :	<u>      </u>	1,4-Dichlorobenzene	<u>ND</u>
<u>1</u>	Toluene	<u>2.50</u> :	<u>      </u>	1,3-Dichlorobenzene	<u>ND</u>
<u>      </u>	Ethyl Benzene	<u>ND</u> :	<u>      </u>	1,2-Dichlorobenzene	<u>ND</u>
<u>      </u>	Chlorobenzene	<u>ND</u> :	<u>      </u>		

3 020

NOTES AND DEFINITIONS FOR THIS REPORT

SCAN = scan number or retention time on chromatogram.

All results reported in ug/L unless otherwise specified

ND = not detected at EPA detection limit method 602, (Federal Register, 12/3/79)



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Analytical Serv

REPORT

NonReported Work

LAB # 86-02-067

FRACTION AND TEST CODES FOR WORK NOT REPORTED ELSEWHERE

01B	:	DUP601	01D	:	DUP602
02B	:	DUP601	02D	:	DUP602
03B	:	DUP601	03D	:	DUP602
04B	:	DUP601	04D	:	DUP602
05B	:	DUP601	05D	:	DUP602

LAB # 86-02-070

REPORT

Analytical Serv

03/05/86 12:51:40

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REPORT Radian Corporation  
10 Loring French  
Austin, Texas

PREPARED Radian Analytical Services  
BY 8501 Mopac Blvd  
P O Box 9948  
Austin, Texas 78762

ATTEN

ATTEN

PHONE (512) 454-4797

CONTACT FRENCH

CLIENT CLAMM & COMPANY  
General Dynamics  
Activity GEM Plant 4, Bldg 4  
Austin, Texas

SAMPLES 5

Know ID Plant 4 Fort Worth, Texas

TAKEN 07/11/86 Neil Robinson

TRANS F&G Ex 021175001

TYPE H2O

# 0 4 012-027-07-40

INVOICE under separate cover

Footnotes and Comments

\* Indicates a value less than 5 times the detection limit  
Potential error for such low values ranges between  
50 and 100%

@ Indicates that spike recovery for this analysis on the  
specific matrix was not within acceptable limits indicating  
an interferent present

SAMPLE IDENTIFICATION

01 860147 H2O  
02 860148 H2O  
03 860149 H2O  
04 860150 H2O  
05 Reseant Bl-mg BPA H2O

Analytical Serv TEST CODES and NAMES used on this report

EX 625 Extraction only - 625 DN/A  
M625 A Method 625 Acid Compounds  
M625 B Method 625 Base/Neutrals  
M625 S GCMS Characterization-AMU  
MS 608 Pesticides & PCBs by GC/MS

LAB # 86-02-070

REPORT

Analytical Serv

RESULTS BY TEST

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TEST CODE	Sample 01 (entered units)	Sample 02 (entered units)	Sample 03 (entered units)	Sample 04 (entered units)	Sample 05 (entered units)
EX 625	02/12/86	02/12/86	02/12/86	02/12/86	02/12/86
data complete					

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Analytical Serv  
Results by Sample

LAB # 86-02-070

SAMPLE ID 860147 H2O  
FRACTION Q1A TEST CODE M625 A NAME Method 625 Acid Compounds  
Date & Time Collected 02/11/86 Category

DATA FILE 20002070001  
CONC FACTOR 1  
DATE EXTRACTED 02/12/86  
DATE INJECTED 02/27/86  
ANALYST INSTRUMENT MM #2  
VERIFIED BY LAK  
COMPOUNDS DETECTED 0

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
11A	21A	2,4,6-trichlorophenol	ND	7A	58A	4-nitrophenol	ND
5A	22A	4-chloro-3-methylphenol	ND	5A	59A	2,4-dinitrophenol	ND
1A	24A	2-chlorophenol	ND	4A	60A	2-methyl-4,6-dinitrophenol	ND
2A	31A	2,4-dichlorophenol	ND	9A	64A	pentachlorophenol	ND
3A	34A	2,4-dimethylphenol	ND	10A	65A	phenol	ND
6A	57A	2-nitrophenol	ND				

3 024

## SURROGATE RECOVERIES

SCAN CODE	COMPOUND	RESULT
470 431	45-phenol	ND
480 432	4-fluorophenol	ND
1110 440	2,4,6-trichlorophenol	ND
254	42-phenol	ND

NOTES AND DEFINITIONS FOR THIS REPORT

SCAN # scan number or retention time or chromatogram  
ALC analysis reported in by 1 unless otherwise specified

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-070

Continued From Above

SAMPLE ID 850147 H2O

FRACTION Q1A

TEST CODE M625 A

NAME Method 625 Acid Compounds

Date & Time Collected 02/11/86

Category

ND = not detected at EPA detection limit method 625, (Federal Register, 11/26/84)  
 BL = detected in reagent blank, background subtraction not performed.  
 J = estimated value, less than method detection limit.  
 CONC FACTOR indicates dilution of sample if greater than one (1). Minimum detection  
 limits should be multiplied by conc factor.

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-070

SAMPLE ID 250147 H20

FRACTION 01A

TEST CODE M525 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/11/86

Category

DATA FILE 25002070001  
DATE EXTRACTED 02/12/86  
DATE INJECTED 02/27/86

ANALYST MM  
INSTRUMENT F2  
COMPOUNDS DETECTED 3  
VERIFIED BY LAM

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
18	18	acenaphthene	ND	418	618	N-nitrosodimethylamine	ND
40	58	benzidine	ND	438	638	N-nitrosodiphenylamine	ND
468	88	1,2,4-trichlorobenzene	ND	428	638	N-nitrosodi-n-propylamine	ND
338	98	hexachlorobenzene	ND	138	1671	bis(2-ethylhexyl)phthalate	12 BL
268	128	hexachloroethane	ND	158	678	butyl benzyl phthalate	ND
118	188	bis(2-chloroethyl)ether	ND	268	1326	di-n-butyl phthalate	4 BL
168	208	2-chloronaphthalene	ND	298	1800	di-n-octyl phthalate	2
308	258	1,2-dichlorobenzene	ND	248	708	diethyl phthalate	ND
218	268	1,3-dichlorobenzene	ND	258	718	dimethyl phthalate	ND
328	278	1,4-dichlorobenzene	ND	58	728	benzo(a)anthracene	ND
278	288	3,3'-dichlorobenzidine	ND	68	738	benzo(a)pyrene	ND
278	298	2,4-dinitrotoluene	ND	78	748	benzo(b)fluoranthene	ND
288	308	2,6-dinitrotoluene	ND	98	758	benzo(k)fluoranthene	ND
298	378	1,1'-diphenylhydrazine	ND	188	768	chrysene	ND
318	388	fluoranthene	ND	288	778	acetylphthalene	ND
178	408	4-chlorophenyl phenyl ether	ND	388	788	anthracene	ND

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Analytical Serv  
Results by Sample

LAB # 86-02-070  
Continued From Above

SAMPLE ID 850147 H2O  
FRACTION Q1A  
TEST CODE N625 B  
NAME Method 625 Base/Neutrals  
Date & Time Collected 02/11/86  
Category

148	418	4-bromophenyl phenyl ether	ND	8B	79B	benzo(ghi)perylene	ND
122	428	bis(2-chloroisopropyl)ether	ND	32B	80B	fluorene	ND
106	438	bis(2-chloroethoxy)methane	ND	44B	81B	phenanthrene B	ND
348	508	hexachlorobutadiene	ND	19B	82B	dibenzo(a,h)anthracene	ND
358	538	hexachlorocyclopentadiene	ND	37B	83B	indeno(1,2,3-cd)pyrene	ND
388	548	isophorone	ND	45B	84B	pyrene	ND
398	558	naphthalene	ND				
408	568	nitrobenzene	ND				

3 027

**SUBSTITUTE RECOVERIES**

SCAN CODE	RESULT
602 851	45-nitrobenzene 8.2%
832 852	2-fluorobiphenyl 5.5%
1481 852	d14-terphenyl 12.0%
684	d10-biphenyl 1.5%

**NOTES AND REFININCS FOR THIS REPORT**

02/11/86 scan number 47 retention time 10.16 chromatogram  
All results reported in 02/11/86 scan number 47  
02/11/86 detected at EPA detection limit of 0.05 ug/g (0.05 ug/g)  
02/11/86 detected at EPA detection limit of 0.05 ug/g (0.05 ug/g)  
02/11/86 detected at EPA detection limit of 0.05 ug/g (0.05 ug/g)  
02/11/86 detected at EPA detection limit of 0.05 ug/g (0.05 ug/g)

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-070

Continued From Above

SAMPLE ID 850147 H2O

FRACTION 01A

TEST CODE N625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/11/86

Category

S = anthracene and phenanthrene co-elute in high concentrations  
 BL = detected in reagent blank; background subtraction not performed.  
 J = estimated value, less than method detection limit  
 CONC FACTOR indicates dilution of sample if greater than one (1). Minimum detection  
 limits should be multiplied by conc. factor.



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Analytical Serv REPORT  
Results by Sample

LAB # 86-02-070

SAMPLE ID 850147 H2O

FRACTION 01A

TEST CODE M8NS 5 NAME GCMS Characterization-ABN

Date & Time Collected 02/11/86

Category

CHSO # 2000207001  
SAMPLE SIZE 1

DATE ANALYZED 02/27/86

VERIFIED BY LAK

UNITS ug/L

CONF REF  
LEVEL CMPD

COMPOUND

RESULT

No PCB's

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-070

SAMPLE ID 850147 H2U

FRACTION 01A

TEST CODE MS 608

NAME Pesticides & PCBs by GC/MS

Date & Time Collected 02/11/86

Category

DATA FILE 2002070001

CONC FACTOR

DATE EXTRACTED 02/12/86

DATE INJECTED 02/27/86

ANALYST

MM

VERIFIED BY LAK

COMPOUNDS DETECTED 0

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1P	85P	aldrin	ND	2P	102P	alpha BHC	ND
10P	90P	dieldrin	ND	3P	100P	beta BHC	ND
6P	91P	chlordane	ND	4P	104P	gamma BHC	ND
7P	92P	4,4'-DDT	ND	5P	105P	delta BHC	ND
8P	93P	4,4'-DDE	ND	18P	106P	PCB-1242	ND
9P	94P	4,4'-DDD	ND	19P	107P	PCB-1254	ND
11P	95P	alpha endosulfan	ND	20P	108P	PCB-1221	ND
12P	96P	beta endosulfan	ND	21P	109P	PCB-1232	ND
13P	97P	endosulfan sulfate	ND	22P	110P	PCB-1248	ND
14P	98P	endrin	ND	23P	111P	PCB-1260	ND
15P	99P	endrin alcohols	ND	24P	112P	PCB-1016	ND
16P	100P	heptachlor	ND	25P	113P	toxaphene	ND
17P	101P	heptachlor epoxide	ND				

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-070

Continued From Above

SAMPLE ID 850147 H2O

FRACTION 01A

TEST CODE MS 608

NAME Pesticides & PCBs by GC/MS

Date & Time Collected 02/11/86

Category

NOTES AND DEFINITIONS FOR THIS REPORT

SCAN = scan number on chromatogram.

All results reported in micrograms/liter unless otherwise specified

ND = not detected at EPA detection limit method 625, (Federal Register, 12/3/79)

VERIFIED BY LAK  
COMPOUNDS DETECTED 2

3 032

STATION CODE	STATION	THICKNESS	DEPTH	REMARKS
1175	1175	1175	1175	1175
1176	1176	1176	1176	1176
1177	1177	1177	1177	1177
1178	1178	1178	1178	1178

[illegible]

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-070

Continued From Above

SAMPLE ID 860148 H2O

FRACTION 02A

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected 02/11/86

Category

NU = not detected at EPA detection limit method 625, (Federal Register, 11/26/84)  
BL = detected in reagent blank; background subtraction not performed.  
J = estimated value, less than method detection limit.  
CENC. FACTOR indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Analytical Serv

REPORT

Results by Sample

LAB # R6-02-070

SAMPLE ID 850148 H2O

FRACTION 02A

TEST CODE M525 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/11/86

Category

DATA FILE 80002070002		DATE EXTRACTED 02/12/86		ANALYST		VERIFIED BY LAZ	
CONC FACTOR 1		DATE INJECTED 02/12/86		INSTRUMENT		COMPOUNDS DETECTED 5	
NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
18	18	acenaphthene	ND	41B	61B	N-nitrosodimethylamine	ND
40	55	benzidine	ND	43B	62B	N-nitrosodiphenylamine	ND
463	88	1,2,4-trichlorobenzene	ND	42B	63B	N-nitrosodi-n-propylamine	ND
308	98	hexachlorobenzene	ND	138	1670	bis(2-ethylhexyl)phthalate	5 BL
368	122	hexachloroethane	ND	15B	67B	butyl benzyl phthalate	ND
11B	185	bis(2-chloroethyl)ether	ND	26B	1325	di-butyl phthalate	5 BL
168	208	2-chloronaphthalene	ND	29B	69B	di-n-octyl phthalate	ND
202	251	1,2-dichlorobenzene	210	24B	70B	diethyl phthalate	ND
212	262	1,3-dichlorobenzene	ND	25B	71B	dimethyl phthalate	ND
228	272	1,4-dichlorobenzene	210	5B	72B	benzo(a)anthracene	ND
232	282	2,3-dichlorobenzidine	ND	6B	73B	benzo(a)pyrene	ND
272	358	2,4-dinitrotoluene	ND	7B	74B	benzo(b)fluoranthene	ND
282	368	2,6-dinitrotoluene	ND	9B	75B	benzo(k)fluoranthene	ND
292	378	1-methylphenylhydrazine	ND	10B	76B	chrysene	ND
312	388	fluoranthene	ND	11B	77B	acenaphthylene	ND
172	398	2-methylphenylhydrazine	ND	12B	78B	anthracene	ND

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-070

Continued From Above

SAMPLE ID 850148 H2O

FRACTION Q2A

TEST CODE M525 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/11/85

Category

148	412	4-bromophenyl phenyl ether	ND	82	79B	benzo(g,h,i)perylene	ND
128	428	bis(2-chloroisopropyl)ether	ND	32B	83B	fluorene	ND
108	432	bis(2-chloroethoxy)methane	ND	44B	81B	phenanthrene B	ND
248	528	hexachlorobutadiene	ND	19B	82B	dibenzo(a,h)anthracene	ND
358	538	hexachlorocyclopentadiene	ND	37B	83B	indeno(1,2,3-cd)pyrene	ND
388	548	isophorone	ND	45B	84B	pyrene	ND
378	514	naphthalene	52				
408	558	nitrobenzene	ND				

3 035

CARBONATE RECOVERIES

SCAN CODE	RESULT
624	45-nitrobenzene 110%
626	2-fluorobiphenyl 95%
1424	4,4'-dibiphenyl 100%
657	4,4'-biphenyl 100%

RECEIVED FOR ANALYSIS FOR THIS REPORT

624 and 626 were detected at 100% recovery from the carbonated stream.  
 All results reported in this report are based on the following:  
 100% not detected at EPA detection limit method 625. (Detection limit 10/26/81)  
 4-bromobiphenyl, 4-bromobiphenyl, 4-bromobiphenyl, 4-bromobiphenyl  
 A 4-bromobiphenyl and 4-bromobiphenyl, high concentration

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-070

Continued From Above

SAMPLE ID 850148 H2O

FRACTION 02A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/11/85

Category

3 = anthracene and phenanthrene co-elute in high concentrations  
 BL = detected in reagent blank, background subtraction not performed.  
 U = estimated value, less than method detection limit.  
 CONC FACTOR indicates dilution of sample if greater than one (1). Minimum detection  
 limits should be multiplied by conc factor.



PAGE 1a

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REPORT

LAB # 86-02-070

Results by Sample

SAMPLE ID 850148 H2O

FRACTION 02A

TEST CODE MSNS S

NAME GCMS Characterization-ABN

Date & Time Collected 02/11/86

Category

CARD # 2000207002

SAMPLE SIZE 1

DATE ANALYZED 02/22/86

UNITS ug/L

VERIFIED BY LAK

SCAN

COMPOUND

RESULT

CONF REF  
LEVEL CMPD

No PCB's

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-070

SAMPLE ID 850148 H2O

FRACTION 02A

TEST CODE MS 608

NAME Pesticides & PCBs by GC/MS

Date & Time Collected 02/11/85

Category

DATA FILE 8502070C02  
CORC FACTOR

DATE EXTRACTED 02/12/85  
DATE INJECTED 02/27/85

ANALYST MM

VERIFIED BY LAK  
COMPOUNDS DETECTED 0

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1P	83P	aldrin	ND	2P	102P	alpha BHC	ND
10P	90P	dieldrin	ND	3P	103P	beta BHC	ND
5P	91P	chlordane	ND	4P	104P	gamma BHC	ND
7P	93P	4,4'-DDT	ND	5P	105P	delta BHC	ND
6P	92P	4,4'-DDE	ND	18P	106P	PCB-1242	ND
9P	94P	4,4'-DDD	ND	19P	107P	PCB-1254	ND
11P	95P	alpha endosulfan	ND	20P	108P	PCB-1221	ND
12P	96P	beta endosulfan	ND	21P	109P	PCB-1232	ND
13P	97P	endosulfan sulfate	ND	22P	110P	PCB-1248	ND
14P	98P	endrin	ND	23P	111P	PCB-1260	ND
15P	99P	enitro aldehyde	ND	24P	112P	PCB-1016	ND
16P	100P	oxyfluorfen	ND	25P	113P	oxyphenol	ND
17P	101P	heptachlor epoxide	ND				

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SAMPLE ID 860148 H20

Analytical Serv

REPORT

Results by Sample

LAB # 86-02-070

Continued From Above

FRACTION 02A TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS  
Date & Time Collected 02/11/86 Category

NOTES AND DEFINITIONS FOR THIS REPORT

SCAN# = scan number on chromatogram

All results reported in micrograms/liter unless otherwise specified

ND = not detected at EPA detection limit method 625, (Federal Register, 12/3/79)

VERIFIED BY LAK  
COMPOUNDS DETECTED 0

STEVENS, W. C.

**THE UNIVERSITY OF CHICAGO**

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-070

Continued From Above

SAMPLE ID 850149 H2O

FRACTION 03A

TEST CODE MS25 A NAME Method 625 Acid Compounds

Date & Time Collected 02/11/86

Category

ND = not detected at EPA detection limit method 625, (Federal Register, 11/26/84).

BL = detected in reagent blank; background subtraction not performed.

J = estimated value; less than method detection limit

COND. FACTOR indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor

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Analytical Serv  
Results by Sample

LAB # 86-02-070

SAMPLE ID 850149 H-1

FRACTION 03A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/11/85

Category

DATA FILE 850149.D002 DATE EXTRACTED 02/12/85  
SAC FACTOR 1.0000 DATE INJECTED 02/02/85

ANALYST INSTRUMENT MM  
COMPOUNDS DETECTED 1

RT	AREA	CPD	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
12	18		acenaphthene	ND	410	610	N-nitrosodimethylamine	ND
40	90		benzidine	ND	430	620	N-nitrosodiphenylamine	ND
410	90		1,2,4-trichlorobenzene	ND	420	630	N-nitrosodi-n-propylamine	ND
270	90		hexachlorobenzene	ND	130	640	bis(2-ethylhexyl)phthalate	ND
260	100		hexachloroethane	ND	150	670	butyl benzyl phthalate	ND
110	100		bis(2-chloroethyl)ether	ND	260	1320	di-n-butyl phthalate	2 BL
160	200		2-chloronaphthalene	ND	290	690	di-n-octyl phthalate	ND
200	150		1,2-dichlorobenzene	ND	240	700	diethyl phthalate	ND
210	240		1,3-dichlorobenzene	ND	250	710	dimethyl phthalate	ND
220	70		1,4-dichlorobenzene	ND	50	720	benzo(a)anthracene A	ND
230	200		1,3-dichlorobenzidine	ND	60	730	benzo(a)pyrene	ND
240	80		2,4-dinitrotoluene	ND	70	740	benzo(b)fluoranthene	ND
250	80		2,6-dinitrotoluene	ND	80	750	benzo(k)fluoranthene	ND
260	80		1,2,4-trichlorobenzene	ND	100	760	chrysene	ND
270	80		1,2,4-trichlorobenzene	ND	110	770	acenaphthylene	ND
280	80		1,2,4-trichlorobenzene	ND	120	780	anthracene	ND

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-070

Continued From Above

SAMPLE ID 860149 H2O

FRACTION 02A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/11/86

Category

148	418	4-bromophenyl phenyl ether	ND	88	798	benzo(ghi)perylene	ND
148	428	bis(2-chloroisopropyl)ether	ND	328	808	fluorene	ND
102	435	bis(2-chloroethoxy)methane	ND	448	818	phenanthrene B	ND
348	528	hexachlorobutadiene	ND	198	828	dibenzo(a,h)anthracene	ND
358	535	hexachlorocyclopentadiene	ND	378	838	indeno(1,2,3-cd)pyrene	ND
388	548	isophorone	ND	458	848	pyrene	ND
398	558	naphthalene	ND				
408	558	nitrobenzene	ND				

## SURROGATE RECOVERIES

SCAN CODE	RESULT
605 B51	d2-nitrobenzene 120%
637 B52	2-fluorobiphenyl 88%
1497 B53	d14-terphenyl 190%
954	d10-biphenyl

3 043

## NOTES AND REFINISHES FOR THIS REPORT

GC/MS scan number or retention time on chromatogram  
All results reported to 19921 unless otherwise specified  
No results detected at EPA detection limit in Method 625, (Federal Register 10/26/77)  
4-methylfluoranthene and benzo(a)fluoranthene are co-eluting  
A benz(a)anthracene and chrysene compound high concentrations

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Analytical Serv

REPORT

LAB # 86-02-070

Results by Sample

Continued From Above

SAMPLE ID 850149 H2O

FRACTION 03A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/11/85

Category

2 = anthracene and phenanthrene co-elute in high concentrations.

SL = detected in reagent blank, background subtraction not performed.

U = estimated value; less than method detection limit

CCW FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor



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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-070

SAMPLE ID 860149 JET

FRACTION 03A

TEST CODE NENS 5 NAME GCMS Characterization-ABN

Date & Time Collected 02/11/86

Category

GROUP # 1000000000

SAMPLE SIZE 1

DATE ANALYZED 02/22/86

UNITS ug/L

VERIFIED BY LAK

SCAN

COMPOUND

RESULT

CONF LEVEL REF CMPD

NO. PAGES

VERIFIED BY LAB  
COMPOUNDS DETECTED 0

3 046

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Analytical Serv

REPORT

LAB # 86-02-070

Results by Sample

Continued From Above

SAMPLE ID 860149 H2O

FRACTION 03A

TEST CODE MS 608

NAME Pesticides & PCBs by GC/MS

Date & Time Collected 02/11/86

Category

NOTES AND DEFINITIONS FOR THIS REPORT

SCAN = scan number on chromatogram.

All results reported in micrograms/liter unless otherwise specified.

ND = not detected at EPA detection limit method 625, (Federal Register, 12/3/79)

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Analytical Serv  
Results by Sample

REPORT

LAB # 86-02-070

SAMPLE ID 850150 H2U

FRACTION 04A

TEST CODE M525 A

NAME Method 625 Acid Compounds

Date & Time Collected 02/11/86

Category

DATA FILE 220920ZC04  
CONC FACTOR 1

DATE EXTRACTED 02/12/86  
DATE INJECTED 02/27/86

ANALYST  
INSTRUMENT

VERIFIED BY LAK  
COMPOUNDS DETECTED

REFS	SCAN	EPA	COMPOUND	RESULT	NPDES	SCAN	EPA	COMPOUND	RESULT
11A	21A		2,4,6-trichlorophenol	ND	7A		58A	4-nitrophenol	ND
8A	32A		4-chloro-3-methylphenol	ND	5A		59A	2,4-dinitrophenol	ND
1A	24A		2-chlorophenol	ND	4A		60A	2-methyl-4,6-dinitrophenol	ND
2A	31A		2,4-dichlorophenol	ND	9A		64A	pentachlorophenol	ND
3A	34A		2,4-dimethylphenol	ND	10A		65A	phenol	ND
6A	57A		2-nitrophenol	ND					

LABORATORY RECOVERIES

TEST CODE	COMPOUND	RESULT
21A	4-nitrophenol	ND
32A	4-chlorophenol	ND
24A	2-chlorophenol	ND
31A	2,4-dichlorophenol	ND
34A	2,4-dimethylphenol	ND
57A	2-nitrophenol	ND

Notes: All data reported in this report are for the sample as received.

NOTE: The data reported in this report are for the sample as received.

NOTE: The data reported in this report are for the sample as received.

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-070

Continued From Above

SAMPLE ID 860150 H20

FRACTION 04A

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected 02/11/86

Category

ND = not detected at EPA detection limit method 625, (Federal Register, 11/26/84).  
SL = detected in reagent blank; background subtraction not performed.  
J = estimated value; less than method detection limit.  
CONC FACTOR indicates dilution of sample if greater than one (1). Minimum detection  
limits should be multiplied by conc factor.

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-070

SAMPLE ID 860150 H20

FRACTION 04A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/11/86

Category

DATA FILE 20U02070C04

DATE EXTRACTED 02/12/86

ANALYST

MM

VERIFIED BY LAK

CONC. FACTOR 1

DATE INJECTED 02/27/86

INSTRUMENT

f2

COMPOUNDS DETECTED 1

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1B	1B	acenaphthene	ND	41B	61B	N-nitrosodimethylamine	ND
4B	5B	benzidine	ND	43B	62B	N-nitrosodiphenylamine	ND
46B	8B	1,2,4-trichlorobenzene	ND	42B	63B	N-nitrosodi-n-propylamine	ND
33B	9B	hexachlorobenzene	ND	13E	66B	bis(2-ethylhexyl)phthalate	ND
36B	12B	hexachloroethane	ND	15B	67B	butyl benzyl phthalate	ND
11B	18B	bis(2-chloroethyl)ether	ND	26B	68B	di-butyl phthalate	2 BL
16B	20B	2-chloronaphthalene	ND	29B	69B	di-n-octyl phthalate	ND
20B	25B	1,2-dichlorobenzene	ND	24B	70B	diethyl phthalate	ND
21B	26B	1,3-dichlorobenzene	ND	25B	71B	dimethyl phthalate	ND
22B	27B	1,4-dichlorobenzene	ND	5B	72B	benzo(a)anthracene A	ND
23B	28B	3,3'-dichlorobenzidine	ND	6B	73B	benzo(a)pyrene	ND
27B	35B	2,4-dinitrotoluene	ND	7E	74B	benzo(b)fluoranthene *	ND
28B	36B	2,6-dinitrotoluene	ND	9B	75B	benzo(k)fluoranthene *	ND
29B	37B	1,2-diphenylhydrazine	ND	18B	76B	chrysene A	ND
31B	39B	fluoranthene	ND	2B	77B	acenaphthylene	ND
17B	40B	4-chlorophenyl phenyl ether	ND	3B	78B	anthracene P	ND

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REPORT

Results by Sample

LAB # 86-02-070

Continued From Above

SAMPLE ID 860150 H2O

FRACTION 04A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/11/86

Category

14B	41B	4-bromophenyl phenyl ether	ND	8B	79B	benzo(ghi)perylene	ND
12B	42B	bis(2-chloroisopropyl)ether	ND	32B	80B	fluorene	ND
10B	43B	bis(2-chloroethoxy)methane	ND	44B	81B	phenanthrene B	ND
34B	52B	hexachlorobutadiene	ND	19B	82B	dibenzo(a,h)anthracene	ND
35B	53B	hexachlorocyclopentadiene	ND	37B	83B	indeno(1,2,3-cd)pyrene	ND
38B	54B	isophorone	ND	45B	84B	pyrene	ND
39B	55B	naphthalene	ND				
40B	56B	nitrobenzene	ND				

## SURROGATE RECOVERIES

SCAN CODE	RESULT
597	DS1
	d5-nitrobenzene 66%
821	DS2
	2-fluorobiphenyl 64%
1487	DS3
	d14-terphenyl 150%
854	DS4
	d10-biphenyl

3 051

## NOTES AND DEFINITIONS FOR THIS REPORT

SCAN = scan number or retention time on chromatogram.  
 All results reported in ug/l unless otherwise specified.  
 ND = not detected at EPA detection limit method 625, (Federal Register, 10/26/84).  
 + = benzo(b)fluoranthene and benzo(k)fluoranthene co-elute  
 A = benzo(a)anthracene and chrysene co-elute, high concentrations.

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REPORT

Results by Sample

LAB # 86-02-070

Continued From Above

SAMPLE ID 860150 H2O

FRACTION 04A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/11/86

Category

B = anthracene and phenanthrene co-elute in high concentrations.  
SL = detected in reagent blank; background subtraction not performed.  
J = estimated value; less than method detection limit.  
CENC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc factor.



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REPORT

Results by Sample

LAB # 86-02-070

FRACTION 04A TEST CODE MSNS S NAME GCMS Characterization-ABN

SAMPLE ID 860150 H20

Date & Time Collected 02/11/86

Category

CHRD # 2CU02070C4

SAMPLE SIZE 1

DATE ANALYZED 02/27/86

UNITS ug/l

VERIFIED BY LAK

SCAN

COMPOUND

RESULT

CONF  
LEVEL

REF  
CMPD

No PCB's

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Analytical Serv

REPORT

LAB # 86-02-070

Results by Sample

SAMPLE ID 850150 H20

FRACTION 04A

TEST CODE MS 608

NAME Pesticides &amp; PCBs by GC/MS

Date &amp; Time Collected 02/11/86

Category

DATA FILE 20002070C04

DATE EXTRACTED 02/12/86

ANALYST

VERIFIED BY LAK

CONC. FACTOR

DATE INJECTED 02/27/86

MM

COMPOUNDS DETECTED 0

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1P	89P	aldrin	ND	2P	102P	alpha BHC	ND
10P	90P	dieldrin	ND	3P	103P	beta DHC	ND
6P	91P	chlordane	ND	4P	104P	gamma DHC	ND
7P	92P	4,4'-DDT	ND	5P	105P	delta BHC	ND
8P	93P	4,4'-DDE	ND	18P	106P	PCB-1242	ND
9P	94P	4,4'-DDD	ND	19P	107P	PCB-1254	ND
11P	95P	alpha endosulfan	ND	20P	108P	PCB-1221	ND
12P	96P	beta endosulfan	ND	21P	109P	PCB-1232	ND
14P	97P	endosulfan sulfate	ND	22P	110P	PCB-1248	ND
14P	98P	endrin	ND	23P	111P	PCB-1260	ND
15P	99P	endrin aldehyde	ND	24P	112P	PCB-1016	ND
16P	100P	heptachlor	ND	25P	113P	toxaphene	ND
17P	101P	heptachlor epoxide	ND				

3 054

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Analytical Serv

REPORT

LAB # 86-02-070

Results by Sample

Continued From Above

SAMPLE ID 860150 H20

FRACTION 04A

TEST CODE MS 608

NAME Pesticides & PCBs by GC/MS

Date & Time Collected 02/11/86

Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number on chromatogram.

All results reported in micrograms/liter unless otherwise specified.

(N) = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-070

SAMPLE ID Reagent Blank BNA H2O

FRACTION 05A

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected not specified

Category

DATA FILE 20602058C05  
CONC FACTOR 1

DATE EXTRACTED 02/12/86  
DATE INJECTED 02/27/86

ANALYST  
INSTRUMENT

MM  
#2

VERIFIED BY LAK  
COMPOUNDS DETECTED 0

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
11A	21A	2,4,6-trichlorophenol	ND	7A	58A	4-nitrophenol	ND
8A	22A	4-chloro-3-methylphenol	ND	5A	59A	2,4-dinitrophenol	ND
1A	24A	2-chlorophenol	ND	4A	60A	2-methyl-4,6-dinitrophenol	ND
2A	31A	2,4-dichlorophenol	ND	9A	64A	pentachlorophenol	ND
3A	34A	2,4-dimethylphenol	ND	10A	65A	phenol	ND
6A	57A	2-nitrophenol	ND				

3 056

## SURROGATE RECOVERIES

SCAN CODE	COMPOUND	RESULT
476 AS1	d5-phenol	51%
357 AS2	2-fluorophenol	64%
1114 AS3	2,4,6-tribromophenol	48%
AS4	d2-phenol	ND

## NOTES AND DEFINITIONS FOR THIS REPORT

SCAN# = scan number or retention time on chromatogram.

All results reported in ug/l unless otherwise specified.

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Analytical Serv

REPORT

LAB # 86-02-070

Results by Sample

Continued From Above

SAMPLE ID Reagent Blank BNA H2O

FRACTION 05A

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected not specified

Category

ND = not detected at EPA detection limit method 625, (Federal Register, 11/26/84).

SL = detected in reagent blank; background subtraction not performed.

J = estimated value; less than method detection limit.

CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-070

SAMPLE ID Reagent Blank BNA H2O

FRACTION 05A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected not specified

Category

DATA FILE 20B02058C05		DATE EXTRACTED 02/12/86		ANALYST		MM		VERIFIED BY LAK	
CONC	FACTOR	1	DATE INJECTED 02/27/86	INSTRUMENT	F2	F2	F2	COMPOUNDS DETECTED	2
NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT	COMPOUND	RESULT
1B	1E	acenaphthene	ND	41B	61B	N-nitrosodimethylamine	ND		
4B	5B	benzidine	ND	43B	62B	N-nitrosodiphenylamine	ND		
46B	8B	1,2,4-trichlorobenzene	ND	42B	63B	N-nitrosodi-n-propylamine	ND		
33B	9B	hexachlorobenzene	ND	13B	167Q	bis(2-ethylhexyl)phthalate	3 BL		
36B	12B	hexachloroethane	ND	15B	67B	butyl benzyl phthalate	ND		
11B	18B	bis(2-chloroethyl)ether	ND	26B	1326	di-butyl phthalate	3 BL		
16B	20B	2-chloronaphthalene	ND	29B	69B	di-n-octyl phthalate	ND		
20B	25B	1,2-dichlorobenzene	ND	24B	70B	diethyl phthalate	ND		
21B	26B	1,3-dichlorobenzene	ND	25B	71B	dimethyl phthalate	ND		
22B	27B	1,4-dichlorobenzene	ND	5B	72B	benzo(a)anthracene A	ND		
23B	28B	3,3'-dichlorobenzidine	ND	6B	73B	benzo(a)pyrene	ND		
27B	35B	2,4-dinitrotoluene	ND	7B	74B	benzo(b)fluoranthene *	ND		
28B	36B	2,6-dinitrotoluene	ND	9B	75B	benzo(k)fluoranthene *	ND		
29B	37B	1,2-diphenylhydrazine	ND	18B	76B	chrysene A	ND		
31B	39B	fluoranthene	ND	2B	77B	acenaphthylene	ND		
17B	40B	4-chlorophenyl phenyl ether	ND	3B	78B	anthracene	ND		

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-070

Continued From Above

SAMPLE ID Reagent Blank BNA H2O

FRACTION 05A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected not specified

Category

148	413	4-bromophenyl phenyl ether	ND	88	79B	benzo(ghi)perylene	ND
128	428	bis(2-chloroisopropyl)ether	ND	328	80B	fluorene	ND
108	433	bis(2-chloroethoxy)methane	ND	44B	81B	phenanthrene B	ND
348	528	hexachlorobutadiene	ND	19B	82B	dibenzo(a,h)anthracene	ND
358	538	hexachlorocyclopentadiene	ND	37B	83B	indeno(1,2,3-cd)pyrene	ND
388	548	isophorone	ND	45B	84B	pyrene	ND
398	558	naphthalene	ND				
408	558	nitrobenzene	ND				

## SURROGATE RECOVERIES

SCAN CODE	RESULT
<u>604</u> 251	d5-nitrobenzene <u>86</u>
<u>831</u> 352	2-fluorobiphenyl <u>78</u>
<u>1424</u> 253	d14-terphenyl <u>82</u>
354	d10-biphenyl

3 059

## NOTES AND DEFINITIONS FOR THIS REPORT

SCAN# = scan number or retention time on chromatogram  
 All results reported in ug/L unless otherwise specified  
 ND = not detected at EPA detection limit method 625, (Federal Register 10/26/84)  
 4 = benzo(b)fluoranthene and benzo(k)fluoranthene correlate  
 5 = benzo(a)anthracene and chrysene correlate high concentrations

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-070

Continued From Above

SAMPLE ID Reagent Blank BNA H20

FRACTION 05A

TEST CODE M625 B NAME Method 625 Base/Neutrals

Date & Time Collected not specified

Category

B = anthracene and phenanthrene co-elute in high concentrations.  
 BL = detected in reagent blank; background subtraction not performed.  
 J = estimated value, less than method detection limit.  
 CONC FACTOR indicates dilution of sample if greater than one (1). Minimum detection  
 limits should be multiplied by conc. factor.



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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-070

SAMPLE ID Reagent Blank BNA H2O FRACTION 05A TEST CODE MSNS S NAME GCMS Characterization-ABN  
Date & Time Collected not specified Category

CIRO # 2CB02058C5 DATE ANALYZED 02/27/86 UNITS ug/l VERIFIED BY LAK

SAMPLE SIZE 1

SCAN

COMPOUND

RESULT

CONF REF  
LEVEL CMPD

No PCB's

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RECEIVED: 02/12/86

Analytical Serv

REPORT

Results by Sample

LAB # 86-02-070

SAMPLE ID Reagent Blank BNA H20

FRACTION Q5A

TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS

Date & Time Collected not specified

Category

DATA FILE 20502058C05

DATE EXTRACTED 02/12/86

ANALYST

VERIFIED BY LAK

CONC FACTOR

DATE INJECTED 02/27/86

HM

COMPOUNDS DETECTED 0

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1P	89P	aldrin	ND	2P	102P	alpha BHC	ND
10P	90P	dieldrin	ND	3P	103P	beta BHC	ND
6P	91P	chlordane	ND	4P	104P	gamma BHC	ND
7P	92P	4,4'-DDT	ND	5P	105P	delta BHC	ND
8P	93P	4,4'-DDE	ND	18P	106P	PCB-1242	ND
9P	94P	4,4'-DDD	ND	19P	107P	PCB-1254	ND
11P	95P	alpha endosulfan	ND	20P	108P	PCB-1221	ND
12P	96P	beta endosulfan	ND	21P	109P	PCB-1232	ND
14P	97P	endosulfan sulfate	ND	22P	110P	PCB-1248	ND
14P	98P	endrin	ND	23P	111P	PCB-1260	ND
15P	99P	endrin aldehyde	ND	24P	112P	PCB-1016	ND
16P	100P	heptachlor	ND	25P	113P	toxaphene	ND
17P	101P	heptachlor epoxide	ND				

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Analytical Serv

REPORT

LAB # 86-02-070

Results by Sample

Continued From Above

SAMPLE ID Reagent Blank BNA H2O

FRACTION 05A

TEST CODE MS 608

NAME Pesticides & PCBs by GC/MS

Date & Time Collected not specified

Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number on chromatogram.

All results reported in micrograms/liter unless otherwise specified.

ND = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).

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Analytical Serv

REPORT

LAB # 86-02-070

NonReported Work

FRACTION AND TEST CODES FOR WORK NOT REPORTED ELSEWHERE

01B : DUP\_NS  
02B : DUP\_NS  
03B : DUP\_NS  
04B : DUP\_NS

PAGE 1

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Analytical Serv

02/20/86 17:02:13

LAB # 86-02-075

REPORT Radian  
TO Bill  
Austin

ATTN Larry Branch

CLIENT PLANT 4  
COMPANY Plant 4  
FACILITY Carswell AFB (Gen Dynamics)

SAMPLES 7

WORK ID groundwater  
TAGGER AM  
TRANS Fed Ex  
TYPE  
P O # 212-027 27  
PACKAGE under separate cover

PREPARED Radian Analytical Services

BY 8501 MoPac Blvd

P.O. Box 9748

Austin, Texas 78766

ATTEN

PHONE (512) 454-4797

CONTACT COVER

*Carl Scott*

CERTIFIED BY

Unknown compound eluting here

Second column confirmation performed for EPA 601 -02, -03, -04, -05, -06, for EPA 602 -02, -03, -08

## Footnotes and Comments

\* Indicates a value less than 5 times the detection limit. Potential error for such low values ranges between 50 and 100%.

@ Indicates that spike recovery for this analysis on the specific matrix was not within acceptable limits indicating an interferent present.

## SAMPLE IDENTIFICATION

1 001192  
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100 001192

## Analytical Serv TEST CODES and NAMES used on this report

GC 601 EPA Method 601/GC  
GC 602 EPA Method 602/GC

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Analytical Serv

REPORT

LAB # 86-02-075

Results by Sample

SAMPLE ID 860152

FRACTION 01A

TEST CODE GC 601

NAME EPA Method 601/GC

Date & Time Collected 02/12/86

Category

DATE FILE 6 DATE INJECTED 02/14/86

ANALYST INSTRUMENT 9

VERIFIED BY MCL

COMPOUNDS DETECTED 1

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
---	Chloromethane	ND	1	Trichloroethene	0.14
---	Bromomethane	ND	---	Dibromochloromethane	*
---	Vinyl Chloride	ND	---	1,1,2-Trichloroethane	*
---	Chloroethane	ND	---	cis-1,3-Dichloropropene	*
---	Methylene Chloride	ND	---	2-Chloroethylvinyl Ether	ND
---	Trichlorofluoromethane	ND	---	Bromoform	ND
---	1,1-Dichloroethene	ND	---	1,1,2,2-Tetrachloroethane	#
---	1,1-Dichloroethane	ND	---	Tetrachloroethylene	#
---	trans-1,2-Dichloroethene	ND	---	Chlorobenzene	ND
---	Chloroform	ND	---	1,3-Dichlorobenzene	ND
---	1,2-Dichloroethane	ND	---	1,2-Dichlorobenzene	ND
---	1,1,1-Trichloroethane	ND	---	1,4-Dichlorobenzene	ND
---	Carbon Tetrachloride	ND			
---	Bromodichloromethane	ND			
---	1,2-Dichloropropane	ND			
---	trans-1,3-Dichloropropane	ND			

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CORPORATION

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RECEIVED 02/13/86  
Analytical Serv.      REPORT  
Results by Sample  
LAB # 85-02-075  
Continued From Above  
FRACTION VIA      TEST CODE GC 601      NAME EPA Method 601/6C  
Date & Time Collected 02/12/86      Category

UNITED AND DEFINITIONS FOR THIS REPORT:

GC/MS - scan number or retention time on chromatogram.  
All results reported in ug/L unless otherwise specified.  
ND - not detected at EPA detection limit method 601, (Federal Register, 12/3/79)  
tribromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.  
#1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

LAB # 86-02-075

REPORT

Analytical Serv

Results by Sample

02/13/86

Sample ID 860152

FRACTION Q1C TEST CODE QC 802 NAME EPA Method 802 GC

Date & Time Collected 02/12/86

Category

DATE INJECTED 02/17/86 ANALYST MCL VERIFIED BY MCL  
INSTRUMENT 1 COMPOUNDS DETECTED 0

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
	Benzene	ND		1,4-Dichlorobenzene	ND
	Toluene	ND		1,3-Dichlorobenzene	ND
	Ethyl Benzene	ND		1,2-Dichlorobenzene	ND
	Chlorobenzene	ND			

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 AND IS NOT TO BE REPRODUCED OR TRANSMITTED IN ANY FORM OR BY ANY MEANS  
 WITHOUT THE WRITTEN PERMISSION OF THE ANALYST  
 DATE 02/13/86 BY 02/13/86



Report  
Generated: 02/13/85

Analytical Serv

REPORT

Results by Sample

LAB # 86-02-075

Sample ID 860153

FRACTION 02A

TEST CODE CC 601

NAME EPA Method 601/8C

Date & Time Collected 02/12/86

Category

ANALYST INSTRUMENT	MCL	VERIFIED BY MCL	COMPOUNDS DETECTED	RESULT
3	9		4	
SCAN	COMPOUND	SCAN	COMPOUND	RESULT
---	Chloromethane	---	Trichloroethane	2274
---	Bromomethane	---	Dibromochloromethane *	ND
---	Vinyl Chloride	---	1,1,2-Trichloroethane *	ND
---	Chloroethane	---	cis-1,3-Dichloropropene *	ND
---	Methylene Chloride	---	2-Chloroethylvinyl Ether	ND
---	Trichlorofluoromethane	---	Bromoform	ND
---	1,1-Dichloroethene	---	1,1,2,2-Tetrachloroethane #	ND
---	1,1-Dichloroethane	---	Tetrachloroethylene #	150
---	trans-1,2-Dichloroethene	---	Chlorobenzene	ND
---	Chloroform	---	1,3-Dichlorobenzene	ND
---	1,2-Dichloroethane	---	1,2-Dichlorobenzene	ND
---	1,1,1-Trichloroethane	---	1,4-Dichlorobenzene	ND
---	Carbon tetrachloride	---		
---	Bromodichloromethane	---		
---	1,1-Dichloropropene	---		
---	cis-1,2-Dichloropropene	---		

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CORPORATION

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ANALYTICAL SERV  
Results by Sample  
REPORT  
LAB # 86-02-075  
Continued From Above  
SAMPLE ID 860153  
FRACTION 02A TEST CODE GC 601 NAME EPA Method 601/GC  
Date & Time Collected 02/12/86 Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.  
All results reported in ug/L unless otherwise specified.  
ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79)  
\*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.  
#1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

# **IRADIAN** CORPORATION

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Analytical Serv

REPORT

LAB # 86-02-075

Results by Sample

SAMPLE ID 860153

FRACTION 02C

TEST CODE GC 602

NAME EPA Method 602/GC

Date & Time Collected 02/12/86

Category

DATE INJECTED 02/14/86 ANALYST MCL VERIFIED BY MCL  
INSTRUMENT 4 COMPOUNDS DETECTED 1

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
	Benzene	ND		1,4-Dichlorobenzene	ND
1	Toluene	701		1,3-Dichlorobenzene	ND
	Ethyl Benzene	ND		1,2-Dichlorobenzene	ND
	Chlorobenzene	ND			

SEE DEFINITIONS FOR THIS REPORT

GC# is scan number or retention time on chromatogram

All results reported in mg/L unless otherwise specified

ND = not detected at EPA detection limit method 602 (Federal Register, 12/2/79)

LAB # 86-02-075

REPORT  
Results by Sample

RECEIVED 02/13/86

ANALYST CC 601 NAME EPA Method 601/6C  
Date & Time Collected 02/12/86 Category

INSTRUMENT 6

VERIFIED BY MCL  
COMPOUNDS DETECTED 3

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
1	Chloromethane	ND	3	Trichloroethene	5670
	Bromomethane	ND		Dibromochloromethane	*
	Vinyl Chloride	1202		1,1,2-Trichloroethane	*
	Chloroethane	ND		cis-1,3-Dichloropropene	*
	Methylene Chloride	ND		2-Chloroethylvinyl Ether	ND
	Trichlorofluoromethane	ND		Bromoform	ND
	1,1-Dichloroethene	ND		1,1,2,2-Tetrachloroethane	#
	1,1-Dichloroethane	ND		Tetrachloroethylene	#
2	trans-1,2-Dichloroethene	256750		Chlorobenzene	ND
	Chloroform	ND		1,3-Dichlorobenzene	ND
	1,2-Dichloroethane	ND		1,2-Dichlorobenzene	ND
	1,1,1-Trichloroethane	ND		1,4-Dichlorobenzene	ND
	Carbon tetrachloride	ND			
	Bromodichloromethane	ND			
	1,1-Dichloropropene	ND			
	trans-1,2-Dichloropropene	ND			

**RADIAN**  
CORPORATION

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Analytical Serv

REPORT

LAB # 85-02-075

Results by Sample

Continued From Above

SAMPLE ID 850154

FRACTION 03A

TEST CODE QC 601 NAME EPA Method 601/GC

Date & Time Collected 02/12/86

Category

NOTES AND DEFINITIONS FOR THIS REPORT

SCAN - scan number or retention time on chromatogram.  
All results reported in ug/L unless otherwise specified.  
ND - not detected at EPA detection limit method 601, (Federal Register, 12/3/79).  
Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.  
1,1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

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Analytical Serv

REPORT

LAB # 86-02-075

Results by Sample

SAMPLE ID 850154

FRACTION Q3C

TEST CUDE GC 602

NAME EPA Method 802/60

Date & Time Collected 02/12/86

Category

INSTRUMENT ANALYST RE VERIFIED BY MCL  
FACTOR 4 COMPOUNDS DETECTED 0

COMPOUND	RESULT	SCAN	COMPOUND	RESULT
Benzene	ND		1,4-Dichlorobenzene	ND
Toluene	ND		1,3-Dichlorobenzene	ND
Ethyl Benzene	ND		1,2-Dichlorobenzene	ND
Propyl Benzene	ND			

NO-A198 443

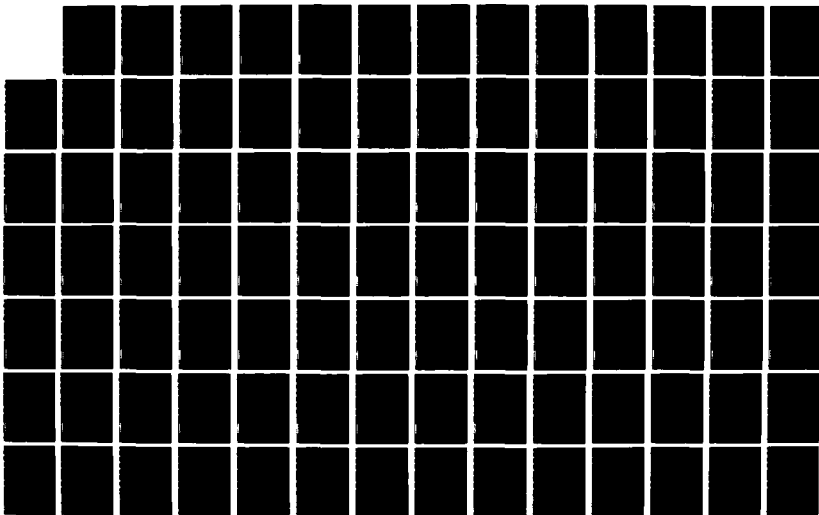
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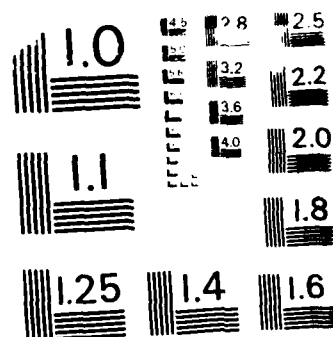
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F/G 24/7

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MICROCOPY RESOLUTION TEST CHART  
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# RADIAN CORPORATION

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-075

SAMPLE ID 860155

FRACTION 04A

TEST CODE GC 601

NAME EPA Method 601/GC

Date & Time Collected 02/12/86

Category

DATA FILE	CONC	DATE INJECTED	ANALYST	INSTRUMENT	RF	VERIFIED BY	MCL
		02/14/86			9		4
SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT	COMPOUND	RESULT
	Chloromethane	ND	4	Trichloroethane	2289		
	Bromomethane	ND		Dibromochloromethane	*	ND	
1	Vinyl Chloride	32.5		1,1,2-Trichloroethane	*	ND	
	Chloroethane	ND		cis-1,3-Dichloropropene	*	ND	
	Methylene Chloride	ND		2-Chloroethylvinyl Ether		ND	
	Trichlorofluoromethane	ND		Bromoform		ND	
	1,1-Dichloroethane	ND		1,1,2,2-Tetrachloroethane	#	ND	
	1,1-Dichloroethane	ND		Tetrachloroethylene	#	ND	
2	trans-1,2-Dichloroethane	974		Chlorobenzene		ND	
	Chloroform	ND		1,3-Dichlorobenzene		ND	
	1,2-Dichloroethane	ND		1,2-Dichlorobenzene		ND	
3	1,1,1-Trichloroethane	62.5		1,4-Dichlorobenzene		ND	
	Carbon Tetrachloride	ND					
	Bromodichloromethane	ND					
	1,2-Dichloropropene	ND					
	trans-1,3-Dichloropropene	ND					

3 075

**RADIAN**  
CORPORATION

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-075

Continued From Above

SAMPLE ID 860155

FRACTION 04A TEST CODE GC 601

NAME EPA Method 601/GC

Date & Time Collected 02/12/86

Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

All results reported in ug/L unless otherwise specified.

ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79).

\*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.

#1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute

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Analytical Serv  
Results by Sample

LAB # 86-02-075

SAMPLE ID 860155

FRACTION 04C TEST CODE GC 602 NAME EPA Method 602/GC  
Date & Time Collected 02/12/86 Category

DATA FILE \_\_\_\_\_ D \_\_\_\_\_ DATE INJECTED 02/14/86 ANALYST \_\_\_\_\_ MCL \_\_\_\_\_ VERIFIED BY MCL \_\_\_\_\_  
CONC FACTOR \_\_\_\_\_ INSTRUMENT \_\_\_\_\_d \_\_\_\_\_ COMPOUNDS DETECTED 0

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
---	Benzene	ND	---	1,4-Dichlorobenzene	ND
---	Toluene	ND	---	1,3-Dichlorobenzene	ND
---	Ethyl Benzene	ND	---	1,2-Dichlorobenzene	ND
---	Chlorobenzene	ND			

3 077

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

All results reported in \_\_\_\_\_ ug/L unless otherwise specified

ND = not detected at EPA detection limit method 602, (Federal Register, 12/3/79)

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Analytical Serv  
Results by Sample

LAB # 86-02-075

SAMPLE ID 860156

FRACTION 05A

TEST CODE GC 601

NAME EPA Method 601/GC

Date & Time Collected 02/12/86

Category

DATA FILE            G      DATE INJECTED 02/14/86      ANALYST            RP                 VERIFIED BY MCL  
CONC FACTOR                 INSTRUMENT            a                 COMPOUNDS DETECTED 3

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
---	Chloromethane	ND	2	Trichloroethane	1.90
---	Bromomethane	ND	---	Dibromochloromethane *	ND
---	Vinyl Chloride	ND	---	1,1,2-Trichloroethane *	ND
---	Chloroethane	ND	---	cis-1,3-Dichloropropene *	ND
---	Methylene Chloride	ND	---	2-Chloroethylvinyl Ether	ND
---	Trichlorofluoromethane	ND	---	Bromoform	ND
---	1,1-Dichloroethene	ND	---	1,1,2,2-Tetrachloroethane #	ND
---	1,1-Dichloroethane	ND	3	Tetrachloroethylene #	1.02
1	trans-1,2-Dichloroethene	5.75	---	Chlorobenzene	ND
---	Chloroform	ND	---	1,3-Dichlorobenzene	ND
---	1,2-Dichloroethane	ND	---	1,2-Dichlorobenzene	ND
---	1,1,1-Trichloroethane	ND	---	1,4-Dichlorobenzene	ND
---	Carbon Tetrachloride	ND			
---	Bromodichloromethane	ND			
---	1,3-Dichloropropene	ND			
---	trans-1,7-Dichloropropene	ND			

**RADIAN**  
CORPORATION

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-075

Continued From Above

SAMPLE ID 860156

FRACTION 05A

TEST CODE GC 601

NAME EPA Method 601/GC

Date & Time Collected 02/12/86

Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

All results reported in ug/L unless otherwise specified.

ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79).

\*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.

#1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

# RADIAN CORPORATION

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Analytical Serv

REPORT

LAB # 86-02-075

Results by Sample

SAMPLE ID 860156

FRACTION 05C TEST CODE GC 602 NAME EPA Method 602/GC

Date & Time Collected 02/12/86

Category

DATA FILE \_\_\_\_\_ D \_\_\_\_\_ DATE INJECTED 02/12/86 ANALYST \_\_\_\_\_ MCL \_\_\_\_\_ VERIFIED BY MCL \_\_\_\_\_  
CONC FACTOR \_\_\_\_\_ INSTRUMENT \_\_\_\_\_ d \_\_\_\_\_ COMPOUNDS DETECTED 1

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
	Benzene	ND		1,4-Dichlorobenzene	ND
1	Toluene	1.43		1,3-Dichlorobenzene	ND
	Ethyl Benzene	ND		1,2-Dichlorobenzene	ND
	Chlorobenzene	ND			

3 080

NOTE: ADD 10-1111045 FOR THIS REPORT

Scan # scan number or retention time on chromatogram

All results reported in  $\mu\text{g/L}$  unless otherwise specified

ND = not detected at EPA detection limit method 602 (Federal Register 10/27/79)

PAGE 1/  
RECEIVED: 02/13/86

Analytical Serv

REPORT

LAB # 86-02-075

Results by Sample

SAMPLE ID 860157

FRACTION 06A

TEST CODE GC 601

NAME EPA Method 601/GC

Date & Time Collected 02/12/86

Category

DATE INJECTED 02/14/86

ANALYST

RP

VERIFIED BY MCL

DATA FILE

9

COMP. FACTOR

INSTRUMENT

2

COMPOUNDS DETECTED 1

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
	Chloromethane	ND		Trichloroethane	ND
	Bromomethane	ND		Dibromochloromethane *	ND
	Vinyl Chloride	ND		1,1,2-Trichloroethane *	ND
	Chloroethane	ND		cis-1,3-Dichloropropene *	ND
	Methylene Chloride	ND		2-Chloroethylvinyl Ether	ND
	Trichlorofluoromethane	ND		Bromoform	ND
	1,1-Dichloroethene	ND		1,1,2,2-Tetrachloroethane #	ND
	1,1-Dichloroethane	ND		Tetrachloroethylene #	ND
1	trans-1,2-Dichloroethene	25872		Chlorobenzene	ND
	Chloroform	ND		1,3-Dichlorobenzene	ND
	1,2-Dichloroethane	ND		1,2-Dichlorobenzene	ND
	1,1,1-Trichloroethane	ND		1,4-Dichlorobenzene	ND
	Carbon Tetrachloride	ND			
	Bromodichloromethane	ND			
	1,2-Dichloropropene	ND			
	trans-1,3-Dichloropropene	ND			

**RADIAN**  
CORPORATION

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SAMPLE ID 860157

Analytical Serv

Results by Sample

REPORT

LAB # 86-02-075

Continued From Above

FRACTION 06A TEST CODE GC 601 NAME EPA Method 601/GC

Date & Time Collected 02/12/86 Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.  
All results reported in ug/L unless otherwise specified.  
ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79).  
\*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.  
#1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.



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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-075

SAMPLE ID 860157

FRACTION 06C

TEST CODE GC 602

NAME EPA Method 602/GC

Date & Time Collected 02/12/86

Category

DATA FILE \_\_\_\_\_ D \_\_\_\_\_ DATE INJECTED 02/13/86 ANALYST \_\_\_\_\_ RF \_\_\_\_\_ VERIFIED BY MCL  
CONC FACTOR \_\_\_\_\_ INSTRUMENT \_\_\_\_\_ 3 COMPOUNDS DETECTED \_\_\_\_\_ 0

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
---	Benzene	ND	---	1,4-Dichlorobenzene	ND
---	Toluene	ND	---	1,3-Dichlorobenzene	ND
---	Ethyl Benzene	ND	---	1,2-Dichlorobenzene	ND
---	Chlorobenzene	ND			

NOTES AND DEFINITIONS FOR THIS REPORT:

SCAN = scan number or retention time on chromatogram.

All results reported in \_\_\_\_\_ ug/L unless otherwise specified.

ND = not detected at EPA detection limit method 602. (Federal Register, 12/3/79)

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-075

SAMPLE ID 860158

FRACTION 07A

TEST CODE GC 601

NAME EPA Method 601/GC

Date & Time Collected 02/12/86

Category

DATA FILE	Q	DATE INJECTED	ANALYST	INSTRUMENT	MCL	VERIFIED BY	MCL
CONC. FACTOR						COMPOUNDS DETECTED	Q
SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT		
	Chloromethane	ND			Trichloroethane	ND	
	Bromomethane	ND			Dibromochloromethane *	ND	
	Vinyl Chloride	ND			1,1,2-Trichloroethane *	ND	
	Chloroethane	ND			cis-1,3-Dichloropropene *	ND	
	Methylene Chloride	ND			2-Chloroethylvinyl Ether	ND	
	Trichlorofluoromethane	ND			Bromoform	ND	
	1,1-Dichloroethene	ND			1,1,2,2-Tetrachloroethane #	ND	
	1,1-Dichloroethane	ND			Tetrachloroethylene #	ND	
	trans-1,2-Dichloroethene	ND			Chlorobenzene	ND	
	Chloroform	ND			1,3-Dichlorobenzene	ND	
	1,2-Dichloroethane	ND			1,2-Dichlorobenzene	ND	
	1,1,1-Trichloroethane	ND			1,4-Dichlorobenzene	ND	
	Carbon Tetrachloride	ND					
	Bromodichloromethane	ND					
	1,2-Dichloropropene	ND					
	trans-1,3-Dichloropropene	ND					

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Analytical Serv

REPORT

LAB # 86-02-075

Results by Sample

Continued From Above

SAMPLE ID 860158

FRACTION 07A

TEST CODE GC 601 NAME EPA Method 601/GC

Date &amp; Time Collected 02/12/86

Category

## NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

All results reported in ug/L unless otherwise specified.

ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79)

\*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.  
#1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

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Analytical Serv  
Results by Sample

REPORT

LAB # 86-02-075

SAMPLE ID 860158

FRACTION O/C TEST CODE GC 602 NAME EPA Method 602/GC

Date & Time Collected 02/12/86

Category

DATA FILE \_\_\_\_\_ D \_\_\_\_\_ DATE INJECTED 02/17/86 ANALYST \_\_\_\_\_ MCL \_\_\_\_\_ VERIFIED BY MCL \_\_\_\_\_  
CONC FACTOR \_\_\_\_\_ INSTRUMENT \_\_\_\_\_ d \_\_\_\_\_ COMPOUNDS DETECTED 1

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
	Benzene	ND		1,4-Dichlorobenzene	ND
1	Toluene	1.45		1,3-Dichlorobenzene	ND
	Ethyl Benzene	ND		1,2-Dichlorobenzene	ND
	Chlorobenzene	ND			

3 086

NOTES AND DEFINITIONS FOR THIS REPORT

SCAN = scan number or retention time on chromatogram.

All results reported in ug/L unless otherwise specified.

ND = not detected at EPA detection limit method 602, (Federal Register, 12/3/79)

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Analytical Serv

REPORT

LAB # 86-02-075

Results by Sample

SAMPLE ID field blank

FRACTION 08A

TEST CODE GC 601 NAME EPA Method 601/GC

Date & Time Collected not specified

Category

DATA FILE	CONC	FACTOR	G	DATE INJECTED	02/15/86	ANALYST	INSTRUMENT	MCL	g	COMPOUNDS DETECTED	0	VERIFIED BY	MCL
SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT	COMPOUND	RESULT	COMPOUND	RESULT	COMPOUND	RESULT	COMPOUND	RESULT
	Chloromethane	ND								Trichloroethane	ND		
	Bromomethane	ND								Dibromochloromethane	*		ND
	Vinyl Chloride	ND								1,1,2-Trichloroethane	*		ND
	Chloroethane	ND								cis-1,3-Dichloropropene	*		ND
	Methylene Chloride	ND								2-Chloroethylvinyl Ether			ND
	Trichlorofluoromethane	ND								Bromoform			ND
	1,1-Dichloroethane	ND								1,1,2,2-Tetrachloroethane	#		ND
	1,1-Dichloroethane	ND								Tetrachloroethylene	#		ND
	trans-1,2-Dichloroethane	ND								Chlorobenzene			ND
	Chloroform	ND								1,3-Dichlorobenzene			ND
	1,2-Dichloroethane	ND								1,2-Dichlorobenzene			ND
	1,1,1-Trichloroethane	ND								1,4-Dichlorobenzene			ND
	Carbon Tetrachloride	ND											
	Bromodichloromethane	ND											
	1,2-Dichloropropene	ND											
	trans-1,3-Dichloropropene	ND											

**RADIAN**  
CORPORATION

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REPORT

Results by Sample

LAB # 86-02-075

Continued From Above

SAMPLE ID field blank

FRACTION 08A

TEST CODE GC 601 NAME EPA Method 601/GC

Date & Time Collected not specified

Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN - scan number or retention time on chromatogram.

All results reported in ug/L unless otherwise specified

ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79)

\*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute  
#1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

# RADIAN CORPORATION

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-075

SAMPLE ID field blank

FRACTION 08B

TEST CODE GC 602 NAME EPA Method 602/GC

Date & Time Collected not specified

Category

DATA FILE \_\_\_\_\_ D \_\_\_\_\_ DATE INJECTED 02/14/86

ANALYST \_\_\_\_\_ MCL \_\_\_\_\_ VERIFIED BY MCL  
INSTRUMENT \_\_\_\_\_ d \_\_\_\_\_ COMPOUNDS DETECTED 1

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
_____	Benzene	ND :	_____	1,4-Dichlorobenzene	ND
1	Toluene	17.4 :	_____	1,3-Dichlorobenzene	ND
_____	Ethyl Benzene	ND :	_____	1,2-Dichlorobenzene	ND
_____	Chlorobenzene	ND :	_____		

3 089

NOTES AND DEFINITIONS FOR THIS REPORT

SCAN = scan number or retention time on chromatogram.

All results reported in \_\_\_\_\_ ug/L unless otherwise specified

ND = not detected at EPA detection limit method 602, (Federal Register, 12/3/79).

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-075

SAMPLE ID trip blank

FRACTION 09A

TEST CODE GC 601 NAME EPA Method 601/GC

Date & Time Collected not specified

Category

DATA FILE 9 DATE INJECTED 02/14/86

CONC. FACTOR

ANALYST INSTRUMENT

VERIFIED BY MCL

COMPOUNDS DETECTED 2

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
	Chloromethane	ND		Trichloroethane	ND
	Bromomethane	ND		Dibromochloromethane *	ND
	Vinyl Chloride	ND		1,1,2-Trichloroethane *	ND
	Chloroethane	ND		cis-1,3-Dichloropropene *	ND
1	Methylene Chloride	0.34		2-Chloroethylvinyl Ether	ND
2	Trichlorofluoromethane	2.11		Bromoform	ND
	1,1-Dichloroethane	ND		1,1,2,2-Tetrachloroethane #	ND
	1,1-Dichloroethane	ND		Tetrachloroethylene #	ND
	trans-1,2-Dichloroethane	ND		Chlorobenzene	ND
	Chloroform	ND		1,3-Dichlorobenzene	ND
	1,2-Dichloroethane	ND		1,2-Dichlorobenzene	ND
	1,1,1-Trichloroethane	ND		1,4-Dichlorobenzene	ND
	Carbon Tetrachloride	ND			
	Bromodichloromethane	ND			
	1,2-Dichloropropane	ND			
	trans-1,3-Dichloropropene	ND			



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Analytical Serv

REPORT

LAB # 86-02-075

Results by Sample

Continued From Above

SAMPLE ID trip blank

FRACTION 09A

TEST CODE GC 601 NAME EPA Method 601/GC

Date & Time Collected not specified

Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

All results reported in ug/L unless otherwise specified.

ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79).

\*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.

#1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

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Analytical Serv

REPORT

LAB # 85-02-075

Results by Sample

SAMPLE ID trip blank

FRACTION 09A TEST CODE GC 602 NAME EPA Method 602/GC

Date & Time Collected not specified

Category

DATA FILE \_\_\_\_\_ D \_\_\_\_\_ DATE INJECTED 02/14/86 ANALYST \_\_\_\_\_ MCL \_\_\_\_\_ VERIFIED BY MCL \_\_\_\_\_  
CONC FACTOR \_\_\_\_\_ INSTRUMENT \_\_\_\_\_ d \_\_\_\_\_ COMPOUNDS DETECTED 0

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
---	Benzene	ND	---	1,4-Dichlorobenzene	ND
---	Toluene	ND	---	1,3-Dichlorobenzene	ND
---	Ethyl Benzene	ND	---	1,2-Dichlorobenzene	ND
---	Chlorobenzene	ND			

NOTES AND DEFINITIONS FOR THIS REPORT

SCAN # scan number or retention time on chromatogram

All results reported in ug/L unless otherwise specified

ND - not detected at EPA detection limit at that GC. (EPA Method 602) 12/8/86

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Analytical Serv REPORT

NonReported Work

LAB # 86-02-075

FRACTION AND TEST CODES FOR WORK NOT REPORTED ELSEWHERE

01B	:	DUP601	01D	:	DUP602
02B	:	DUP601	02D	:	DUP602
03B	:	DUP601	03D	:	DUP602
04B	:	DUP601	04D	:	DUP602
05B	:	DUP601	05D	:	DUP602
06B	:	DUP601	06D	:	DUP602
07B	:	DUP601	07D	:	DUP602

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Analytical Serv

REPORT

LAB # 86-02-078

REPORT Radian Corporation  
TO Larry French  
Austin, Texas

PREPARED Radian Analytical Services  
BY 8501 MoPac Blvd.  
P.O. Box 9948  
Austin, Texas 78766

ATTN

ATTEN  
PHONE (512) 454-4797

CONTACT FRENCH

CLIENT ELAUI 4 SAMPLES 5  
COMPANY General Dynamics  
FACILITY GEHL Plant 4, Bldg 4  
Austin, Texas

WORK ID General Dynamics Ft. Worth  
TAKEN 2/12/86  
TRANS Federal 323021134  
TYPE H2O (625 only)  
P O # 212-027-27-40  
INVOICE under separate cover

## Footnotes and Comments

\* Indicates a value less than 5 times the detection limit  
Potential error for such low values ranges between  
50 and 100%.

@ Indicates that spike recovery for this analysis on the  
specific matrix was not within acceptable limits indicating  
an interferent present.

## SAMPLE IDENTIFICATION

01 860152  
02 860153  
03 860154  
04 860155  
05 860152 Dup Analysis BNA  
05 860155 Matrix Spike BNA  
05 reagent blank BNA

## Analytical Serv TEST CODES and NAMES used on this report

EX 625 Extraction only -- 625 BNA  
M625 A Method 625 Acid Compounds  
M625 B Method 625 Base/Neutrals  
MSNS S GCMs Characterization-AEN  
MS 608 Pesticides & PCBs by GC/MS

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Analytical Serv

REPORT

LAB # 86-02-078

RESULTS BY TEST

TEST CODE	Sample 01 (entered units)	Sample 02 (entered units)	Sample 03 (entered units)	Sample 04 (entered units)	Sample 05 (entered units)
EX 625	02/13/86	02/13/86	02/13/86	02/13/86	02/13/86
date complete					

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Analytical Serv REPORT  
Results by Sample

LAB # 86-02-078

SAMPLE ID 860152

FRACTION Q1A TEST CODE M625 A NAME Method 625 Acid Compounds  
Date & Time Collected 02/12/86 Category

DATA FILE 20002078C01  
CONC FACTOR 1

DATE EXTRACTED 02/13/86  
DATE INJECTED 02/27/86

ANALYST WJL  
INSTRUMENT F2

VERIFIED BY LAK  
COMPOUNDS DETECTED 0

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
11A	21A	2,4,6-trichlorophenol	ND	7A	58A	4-nitrophenol	ND
8A	22A	4-chloro-3-methylphenol	ND	5A	59A	2,4-dinitrophenol	ND
1A	24A	2-chlorophenol	ND	4A	60A	2-methyl-4,6-dinitrophenol	ND
2A	31A	2,4-dichlorophenol	ND	9A	64A	pentachlorophenol	ND
3A	34A	2,4-dimethylphenol	ND	10A	65A	phenol	ND
6A	57A	2-nitrophenol	ND				

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## SURROGATE RECOVERIES

SCAN CODE	COMPOUND	RESULT
472	451	d5-phenol 65
352	452	2-fluorophenol 66
1456	453	2,4,6-tribromophenol 77
454		d3-phenol

## NOTES AND DEFINITIONS FOR THIS REPORT:

SCAN# = scan number or retention time on chromatogram.  
All results reported in ug/l unless otherwise specified

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Analytical Serv

REPORT

LAB # 86-02-078

Results by Sample

Continued From Above

SAMPLE ID 850152

FRACTION 01A

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected 02/12/86

Category

ND = not detected at EPA detection limit method 625, (Federal Register, 11/26/84).  
SL = detected in reagent blank; background subtraction not performed.  
J = estimated value; less than method detection limit.  
CENC FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-078

SAMPLE ID 850152

FRACTION 01A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/12/86

Category

DATA FILE 200020792C01  
CONC. FACTOR 1

DATE EXTRACTED 02/13/86  
DATE INJECTED 02/27/86

ANALYST  
INSTRUMENT

WJL  
f2

VERIFIED BY LAK  
COMPOUNDS DETECTED 1

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
18	18	acenaphthene	ND	41B	61B	N-nitrosodimethylamine	ND
48	58	benzidine	ND	43B	62B	N-nitrosodiphenylamine	ND
468	88	1,2,4-trichlorobenzene	ND	42B	63B	N-nitrosodi-n-propylamine	ND
338	98	hexachlorobenzene	ND	13B	66B	bis(2-ethylhexyl)phthalate	ND
368	128	hexachloroethane	ND	15B	67B	butyl benzyl phthalate	ND
118	188	bis(2-chloroethyl)ether	ND	26B	68B	di-butyl phthalate	3 BL
168	208	2-chloronaphthalene	ND	29B	69B	di-n-octyl phthalate	ND
208	258	1,2-dichlorobenzene	ND	24B	70B	diethyl phthalate	ND
218	268	1,3-dichlorobenzene	ND	25B	71B	dimethyl phthalate	ND
228	278	1,4-dichlorobenzene	ND	5B	72B	benzo(a)anthracene A	ND
238	288	3,3'-dichlorobenzidine	ND	6B	73B	benzo(a)pyrene	ND
278	358	2,4-dinitrotoluene	ND	7B	74B	benzo(b)fluoranthene *	ND
288	368	2,6-dinitrotoluene	ND	9B	75B	benzo(k)fluoranthene *	ND
298	378	1,2-diphenylhydrazine	ND	18B	76B	chrysene A	ND
318	398	fluoranthene	ND	20B	77B	acenaphthylene	ND
178	408	4-chlorophenyl phenyl ether	ND	38B	78B	anthracene P	ND



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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-078

Continued From Above

SAMPLE ID 860152

FRACTION 01A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/12/86

Category

148	412	4-bromophenyl phenyl ether	ND	88	79B	benzo(ghi)perylene	ND
128	428	bis(2-chloroisopropyl)ether	ND	32B	80B	fluorene	ND
108	433	bis(2-chloroethoxy)methane	ND	44B	81B	phenanthrene B	ND
248	508	hexachlorobutadiene	ND	19B	82B	dibenzo(a,h)anthracene	ND
358	538	hexachlorocyclopentadiene	ND	37B	83B	indeno(1,2,3-cd)pyrene	ND
328	543	isophorone	ND	45B	84B	pyrene	ND
398	558	naphthalene	ND				
408	558	nitrobenzene	ND				

## SURROGATE RECOVERIES

SCAN CODE	RESULT
524 851	45-nitrobenzene 66
834 892	2-Fluorobiphenyl 55
1484 893	44-terphenyl 77
294	410-biphenyl

## NOTES AND DEFINITIONS FOR THIS REPORT

0248 is scan number or retention time for each category.  
 All results reported in this report are for the specific  
 100% not detected or EPA detection limit method 625, Federal Register, 10/26/81  
 1 = benzo(b)fluoranthene and benzo(k)fluoranthene to elute  
 2 = benzo(a)anthracene and chrysene to elute high concentrations

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-078

Continued From Above

SAMPLE ID 850152

FRACTION Q1A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/12/86

Category

B = anthracene and phenanthrene co-elute in high concentrations.  
 BL = detected in reagent blank, background subtraction not performed.  
 D = estimated value, less than method detection limit.  
 CONC FACTOR indicates dilution of sample if greater than one (1). Minimum detection  
 limits should be multiplied by conc factor.

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Analytical Serv

REPORT

LAB # 86-02-078

Results by Sample

SAMPLE ID 850152

FRACTION 01A

TEST CODE MSNS S NAME GCMS Characterization-ABN

Date & Time Collected 02/12/86

Category

CHRD # 2002078C01

SAMPLE SIZE 1

VERIFIED BY LAK

DATE ANALYZED 02/27/86

UNITS ug/l

SCAN

COMPOUND

RESULT

CONF REF  
LEVEL CMPD

No PCB's

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Analytical Serv  
Results by Sample

LAB # 86-02-078

SAMPLE ID 860152

FRACTION 01A

TEST CODE MS 608

NAME Pesticides & PCBs by GC/MS

Date & Time Collected 02/12/86

Category

DATA FILE 20002078001  
CONC FACTOR

DATE EXTRACTED 02/13/86  
DATE INJECTED 02/27/86

ANALYST WJL

VERIFIED BY LAK  
COMPOUNDS DETECTED 0

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1P	67P	aldrin	ND	2P	102P	alpha BHC	ND
10P	90P	dieldrin	ND	3P	103P	beta BHC	ND
6P	91P	chlordane	ND	4P	104P	gamma DHC	ND
7P	92P	4,4'-DDT	ND	5P	105P	delta BHC	ND
8P	93P	4,4'-DDE	ND	18P	106P	PCB-1242	ND
9P	94P	4,4'-DDD	ND	19P	107P	PCB-1254	ND
11P	95P	alpha endosulfan	ND	20P	108P	PCB-1221	ND
12P	96P	beta endosulfan	ND	21P	109P	PCB-1232	ND
14P	97P	endosulfan sulfate	ND	22P	110P	PCB-1248	ND
14P	98P	endrin	ND	23P	111P	PCB-1260	ND
15P	99P	endrin aldehyde	ND	24P	112P	PCB-1016	ND
16P	100P	heptachlor	ND	25P	113P	toxaphene	ND
17P	101P	heptachlor epoxide	ND				

# RADIAN CORPORATION

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-078

Continued From Above

SAMPLE ID 850152

FRACTION 01A

TEST CODE MS 608

NAME Pesticides & PCBs by GC/MS

Date & Time Collected 02/12/86

Category

## NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number on chromatogram.

All results reported in micrograms/liter unless otherwise specified.

ND = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-078

SAMPLE ID 850153

FRACTION 02A

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected 02/12/86

Category

DATA FILE 20002078002  
CONC. FACTOR 1

DATE EXTRACTED 02/13/86  
DATE INJECTED 02/27/86

ANALYST WJL  
INSTRUMENT #2

VERIFIED BY LAK  
COMPOUNDS DETECTED 2

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
11A	21A	2,4,6-trichlorophenol	ND	7A	58A	4-nitrophenol	ND
8A	22A	4-chloro-3-methylphenol	ND	5A	59A	2,4-dinitrophenol	ND
3 1A	24A	2-chlorophenol	ND	4A	60A	2-methyl-4,6-dinitrophenol	ND
2A 65A	31A	2,4-dichlorophenol	4	9A	64A	pentachlorophenol	ND
2A	34A	2,4-dimethylphenol	ND	10A	475 65A	phenol	2
6A	57A	2-nitrophenol	ND				

## SURROGATE RECOVERIES

SCAN CODE	COMPOUND	RESULT
472 491	d5-phenol	53
451 492	2-fluorophenol	72
434 493	2,4,6-tribromophenol	72
454	d3-phenol	

## NOTES AND DEFINITIONS FOR THIS REPORT

SCAN # scan number or retention time on chromatogram.  
All results reported in ug/l unless otherwise specified

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Analytical Serv

REPORT

LAB # 86-02-078

Results by Sample

Continued From Above

SAMPLE ID 850153

FRACTION 02A

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected 02/12/86

Category

ND = not detected at EPA detection limit method 625, (Federal Register, 11/26/84).  
BL = detected in reagent blank, background subtraction not performed.  
U = estimated value; less than method detection limit.  
CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-078

SAMPLE ID 860153

FRACTION 02A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/12/86

Category

DATA FILE 20002078C02		DATE EXTRACTED 02/13/86		ANALYST		WJL		VERIFIED BY LAK	
CONC FACTOR 1		DATE INJECTED 02/27/86		INSTRUMENT		F2		COMPOUNDS DETECTED 7	
NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT		
18	18	acenaphthene	ND	41B	61B	N-nitrosodimethylamine	ND		
48	58	benzidine	ND	43B	62B	N-nitrosodiphenylamine	ND		
468	88	1,2,4-trichlorobenzene	ND	42B	63B	N-nitrosodi-n-propylamine	ND		
338	98	hexachlorobenzene	ND	138	1673	bis(2-ethylhexyl)phthalate	4		
268	128	hexachloroethane	ND	15B	67B	butyl benzyl phthalate	ND		
118	188	bis(2-chloroethyl)ether	ND	26B	1329	di-butyl phthalate	4 BL		
168	208	2-chloronaphthalene	ND	29B	69B	di-n-octyl phthalate	ND		
208	258	1,2-dichlorobenzene	240	24B	70B	diethyl phthalate	ND		
218	268	1,3-dichlorobenzene	ND	25B	71B	dimethyl phthalate	ND		
228	278	1,4-dichlorobenzene	35	5B	72B	benzo(a)anthracene A	ND		
238	288	3,3'-dichlorobenzidine	ND	6B	73B	benzo(a)pyrene	ND		
278	358	2,4-dinitrotoluene	ND	7C	74B	benzo(b)fluoranthene *	ND		
288	368	2,6-dinitrotoluene	ND	9B	75B	benzo(k)fluoranthene *	ND		
298	378	1,2-diphenylhydrazine	ND	18B	76B	chrysene A	ND		
318	428	fluoranthene	ND	2B	77B	acenaphthylene	ND		
178	408	4-chlorophenyl phenyl ether	ND	3B	78B	anthracene p	ND		





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Analytical Serv

REPORT

LAB # 86-02-078

Results by Sample

Continued From Above

SAMPLE ID 850153

FRACTION 02A

TEST CODE N625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/12/86

Category

9. Anthracene and phenanthrene co-elute in high concentrations.

SL = detected in reagent blank; background subtraction not performed.

1. Estimated value, less than method detection limit.

CONC. FACTOR indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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ANALYTICAL SERV  
Results by Sample

REPORT

FRACTION 02A TEST CODE MSNS S NAME GCMS Characterization-ABN

Date & Time Collected 02/12/86

Category

CI-O # 5002078C02

SAMPLE SIZE 1

DATE ANALYZED 02/27/86

UNITS ug/l

VERIFIED BY LAK

SCAN

COMPOUND

RESULT

CONF LEVEL REF CMPD

No PCB's

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Analytical Serv  
Results by Sample

LAB # 86-02-078

SAMPLE ID 250153

FRACTION 02A TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS  
Date & Time Collected 02/12/86 Category

DATA FILE 2502078C02  
CONC FACTOR

DATE EXTRACTED 02/13/86  
DATE INJECTED 02/27/86

ANALYST WJL

VERIFIED BY LAK  
COMPOUNDS DETECTED 0

NPDES SCAN	IPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1P	87P	aldrin	ND	2P	102P	alpha BHC	ND
10P	90P	dieldrin	ND	3P	103P	beta BHC	ND
6P	91P	chlordane	ND	4P	104P	gamma BHC	ND
7P	92P	4,4'-DDT	ND	5P	105P	delta BHC	ND
8P	93P	4,4'-DDE	ND	18P	106P	PCB-1242	ND
9P	94P	4,4'-DDD	ND	19P	107P	PCB-1254	ND
11P	95P	alpha endosulfan	ND	20P	108P	PCB-1221	ND
12P	96P	beta endosulfan	ND	21P	109P	PCB-1232	ND
13P	97P	endosulfan sulfate	ND	22P	110P	PCB-1248	ND
14P	98P	endrin	ND	23P	111P	PCB-1260	ND
15P	99P	endrin aldehyde	ND	24P	112P	PCB-1016	ND
16P	100P	heptachlor	ND	25P	113P	toxaphene	ND
17P	101P	heptachlor epoxide	ND				

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-078

Continued From Above

SAMPLE ID 850153

FRACTION 02A

TEST CODE MS 608

NAME Pesticides & PCBs by GC/MS

Date & Time Collected 02/12/86

Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number on chromatogram

All results reported in micrograms/liter unless otherwise specified.

ND = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-078

SAMPLE ID 860154

FRACTION 02A

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected 02/12/86

Category

DATA FILE 20002078003  
CONC. FACTOR 1

DATE EXTRACTED 02/13/86  
DATE INJECTED 02/28/86

ANALYST  
INSTRUMENT

WJL  
F2  
VERIFIED BY LAK  
COMPOUNDS DETECTED 2

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
11A	21A	2,4,6-trichlorophenol	ND	7A	58A	4-nitrophenol	ND
8A	22A	4-chloro-3-methylphenol	ND	5A	59A	2,4-dinitrophenol	ND
1A	24A	2-chlorophenol	ND	4A	60A	2-methyl-4,6-dinitrophenol	ND
2A	31A	2,4-dichlorophenol	3	9A	64A	pentachlorophenol	ND
2A	34A	2,4-dimethylphenol	ND	10A	65A	phenol	2
6A	57A	2-nitrophenol	ND				

## SURROGATE RECOVERIES

SCAN CODE	COMPOUND	RESULT
449	451	45-phenol 67
222	422	2-fluorophenol 23
1121	423	2,4,6-tribromophenol 21
454	43-phenol	

## NOTES AND DEFINITIONS FOR THIS REPORT

SCAN is scan number or retention time on chromatogram  
 All results reported in ug/l unless otherwise specified

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-078

Continued From Above

SAMPLE ID 850154

FRACTION 03A

TEST CODE N625 A NAME Method 625 Acid Compounds

Date & Time Collected 02/12/86

Category

ND = not detected at EPA detection limit method 625, (Federal Register, 11/26/84)  
 BL = detected in reagent blank; background subtraction not performed.  
 J = estimated value, less than method detection limit  
 CONC FACTOR indicates dilution of sample if greater than one (1) Minimum detection  
 limits should be multiplied by conc. factor.

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-078

SAMPLE ID 250154

FRACTION 03A

TEST CODE 1625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/12/86

Category

DATA FILE 20020908002		DATE EXTRACTED 09/12/06		ANALYST		WJL		VERIFIED BY LAR	
COND FACTOR 1		DATE INJECTED 02/09/06		INSTRUMENT		F2		COMPOUNDS DETECTED 6	
NUMBERS	SCAN	EPA	COMPOUND	RESULT	NPDES	SCAN	EPA	COMPOUND	RESULT
15	18	18	acenaphthene	ND	418	418	418	N-nitrosodimethylamine	ND
48	50	50	benzidine	ND	438	438	438	N-nitrosodiphenylamine	ND
49B	68	68	1,2,4-trichlorobenzene	ND	428	428	428	N-nitrosodi-n-propylamine	ND
308	98	98	hexachlorobenzene	ND	138	1662	668	bis(2-ethylhexyl)phthalate	17
368	128	128	hexachloroethane	ND	158	158	678	butyl benzyl phthalate	ND
118	188	188	bis(2-chloroethyl)ether	ND	268	1313	688	di-butyl phthalate	4, 8L
168	208	208	2-chloronaphthalene	ND	278	1797	698	di-n-octyl phthalate	2
208	228	228	1,2-dichlorobenzene	220	248	248	708	diethyl phthalate	ND
210	248	248	1,3-dichlorobenzene	ND	258	258	718	dimethyl phthalate	ND
228	268	278	1,4-dichlorobenzene	40	58	58	728	benzo(a)anthracene A	ND
238	288	288	3,3'-dichlorobenzidine	ND	68	68	738	benzo(a)pyrene	ND
278	308	308	2,4-dinitrotoluene	45	78	78	748	benzobifluoranthene A	ND
288	328	328	2,6-dinitrotoluene	ND	88	88	758	benzo(k)fluoranthene A	ND
338	348	348	1,1'-dipterysindimethine	ND	108	108	768	chrysene A	ND
318	368	368	chloranthene	ND	118	118	778	phenanthrene	ND
378	388	388	1,2,3,4-tetrachlorobenzene	ND	128	128	788	anthracene B	ND





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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-078

Continued From Above

SAMPLE ID 860154

FRACTION 02A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/12/86

Category

S = anthracene and phenanthrene co-elute in high concentrations  
 SL = detected in reagent blank; background subtraction not performed  
 U = estimated value, less than method detection limit  
 CONC FACTOR indicates dilution of sample if greater than one (1). Minimum detection  
 limits should be multiplied by conc factor.

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Analytical Serv

REPORT

LAB # 86-02-078

Results by Sample

SAMPLE ID 250154

FRACTION 03A

TEST CODE MSMS 5

NAME GCMS Characterization-ABN

Date & Time Collected 02/12/86

Category

CHRU # 8602078003

SAMPLE SITE 1

DATE ANALYZED 02/28/86

UNITIS ug/L

VERIFIED BY LAK

SCAN

COMPOUND

RESULT

CONF. REF.  
LEVEL. CMPD

No. PCB's

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-078

SAMPLE ID 860154

FRACTION 03A

TEST CODE MS 608

NAME Pesticides & PCBs by GC/MS

Date & Time Collected 02/12/86

Category

DATA FILE 80022078002  
CONC FACTOR

DATE EXTRACTED 02/13/86  
DATE INJECTED 02/28/86

ANALYST WJL

VERIFIED BY LAK  
COMPOUNDS DETECTED 0

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1P	89P	aldrin	ND	2P	102P	alpha BHC	ND
10P	90P	dieldrin	ND	3P	103P	beta BHC	ND
6P	91P	chlordane	ND	4P	104P	gamma BHC	ND
7P	92P	4,4'-DDT	ND	5P	105P	delta BHC	ND
8P	93P	4,4'-DDE	ND	18P	106P	PCB-1242	ND
9P	94P	4,4'-DDD	ND	19P	107P	PCB-1254	ND
11P	95P	alpha endosulfan	ND	20P	108P	PCB-1221	ND
12P	96P	beta endosulfan	ND	21P	109P	PCB-1232	ND
14P	97P	endosulfan sulfate	ND	22P	110P	PCB-1248	ND
14P	98P	endosulfan	ND	23P	111P	PCB-1260	ND
15P	99P	endrin aldehyde	ND	24P	112P	PCB-1015	ND
16P	100P	heptachlor	ND	25P	113P	toxaphene	ND
17P	101P	heptachlor epoxide	ND				

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Analytical Serv

REPORT

LAB # 86-02-078

Results by Sample

Continued From Above

SAMPLE ID 850154

FRACTION 03A

TEST CODE MS 608

NAME Pesticides & PCBs by GC/MS

Date & Time Collected 02/12/86

Category

NOTES AND DEFINITIONS FOR THIS REPORT

SCAN = scan number on chromatogram

All results reported in micrograms/liter unless otherwise specified.

ND = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).

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 SAMPLE ID B50155  
 Analytical Serv  
 Results by Sample  
 REPORT  
 LAB # 86-02-078  
 FRACTION 04A TEST CODE M625 A NAME Method 625 Acid Compounds  
 Date & Time Collected 02/12/85 Category

DATA FILE 00002078004  
 CONFC FACTOR 1  
 DATE EXTRACTED 02/13/85  
 DATE INJECTED 02/28/85  
 ANALYST WJL  
 INSTRUMENT F2  
 VERIFIED BY LAK  
 COMPOUNDS DETECTED 1

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
11A	214	2,4,6-trichlorophenol	ND	7A	58A	4-nitrophenol	ND
8A	324	4-chloro-3-methylphenol	ND	5A	59A	2,4-dinitrophenol	ND
1A	244	2-chlorophenol	ND	4A	60A	2-methyl-4,6-dinitrophenol	ND
2A	31A	2,4-dichlorophenol	ND	9A	64A	pentachlorophenol	ND
3A	34A	2,4-dimethylphenol	ND	10A	475	65A	phenol
4A	51A	2-nitrophenol	ND				2

## SURROGATE RECOVERIES

SCAN CODE	COMPOUND	RESULT
477	451	45-phenol
451	452	2-Fluorophenol
452	453	2,4-dinitrophenol
453	454	45-phenol

NOTES AND REVISIONS FOR THIS REPORT

00002078004 number of revision 114 to be processed  
 all results reported in by 1 unit of 10000 specified

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-078

Continued From Above

SAMPLE ID 850155

FRACTION 04A

TEST CODE N625 A NAME Method 625 Acid Compounds

Date & Time Collected 02/12/86

Category

Not detected at EPA detection limit method 625, (Federal Register, 11/26/84).

Not detected in reagent blank, background subtraction not performed.

Estimated value, less than method detection limit

CFR FACTOR indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc factor

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-0/8

SAMPLE ID 950155

FRACTION 04A

TEST CODE N625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/12/86

Category

DATA FILE 220101072004		DATE EXTRACTED 02/13/86	ANALYST	U/L		VERIFIED BY LAK	
CONC	FACTOR	DATE INJECTED 02/28/86	INSTRUMENT	72		COMPOUNDS DETECTED 2	
NPDES SIGN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
18	1B	acenaphthene	ND	41B	61D	N nitrosodimethylamine	ND
48	5B	benzidine	ND	43B	62B	N-nitrosodiphenylamine	ND
45B	8B	1,2,4-trichlorobenzene	ND	42B	63B	N-nitrosodi-n-propylamine	ND
33B	5B	hexachlorobenzene	ND	13B 1675	66B	bis(2-ethylhexyl)phthalate	2
26B	12B	hexachloroethane	ND	15B	67B	butyl benzyl phthalate	ND
11B	18B	bis(2-chloroethyl)ether	ND	26B 1024	68B	di-butyl phthalate	6 BL
16B	20B	2-chloronaphthalene	ND	27B	69B	di-n-octyl phthalate	ND
20B	25B	1,2-dichlorobenzene	ND	24B	70B	diethyl phthalate	ND
21B	26B	1,3-dichlorobenzene	ND	25B	71B	dimethyl phthalate	ND
22B	27B	1,4-dichlorobenzene	ND	5B	72B	benzo(a)anthracene	ND
23B	33B	3,3'-dichlorobenzidine	ND	6B	73B	benzo(c)pyrene	ND
27B	35B	2,4-dinitrotoluene	ND	7B	74B	benzo(b)fluoranthene	ND
28B	36B	2,6-dinitrotoluene	ND	9B	75B	benzo(k)fluoranthene	ND
29B	43B	1,2-bis(4-phenyl)hydrazine	ND	10B	76B	pyrene	ND
31B	49B	fluoranthene	ND	11B	77B	acenaphthylene	ND
17B	41B	4-chlorophenyl phenyl ether	ND	12B	78B	anthracene	ND





# RADIAN CORPORATION

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-078

Continued From Above

SAMPLE ID 860155

FRACTION 04A

TEST CODE N625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/12/86

Category

B = anthracene and phenanthrene co-elute in high concentrations  
EL = detected in reagent blank; background subtraction not performed  
J = estimated value; less than method detection limit  
CCMC FACTOR indicates dilution of sample if greater than one (1). Minimum detection  
limits should be multiplied by conc factor.

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-078

SAMPLE ID 850155

FRACTION 04A

TEST CODE MSNS S

NAME GCMS Characterization-ABN

Date & Time Collected 02/12/86

Category

CI 40 # 5002078C04

SAMPLE SIZE 1

DATE ANALYZED 02/28/86

UNITS ug/L

VERIFIED BY LAK

SCAN

COMPOUND

RESULT

CONF REF  
LEVEL CMPD

No PCB's

PAGE 03

RECEIVED 02/13/86

Analytical Serv

Results by Sample

REPORT

LAB # 86-02-078

SAMPLE ID 950155

FRACTION 04A

TEST CODE MS 608

NAME Pesticides & PCBs by GC/MS

Date & Time Collected 02/12/86

Category

DATA FILE 1002000004  
CONC FACTOR

DATE EXTRACTED 02/10/86  
DATE INJECTED 02/28/86

ANALYST

VERIFIED BY LAK  
COMPOUNDS DETECTED 0

INDEX	SCAN	EPA	COMPOUND	RESULT	NPDES	SCAN	EPA	COMPOUND	RESULT
1P	67P		aldrin	ND	2P	102P		alpha BHC	ND
10P	90P		dieldrin	ND	3P	103P		beta BHC	ND
6P	91P		chlordane	ND	4P	104P		gamma BHC	ND
7P	92P		4,4'-DDT	ND	5P	105P		delta BHC	ND
8P	93P		4,4'-DDE	ND	18P	106P		PCB-1242	ND
9P	94P		4,4'-DDD	ND	19P	107P		PCB-1254	ND
11P	95P		alpha endosulfan	ND	20P	108P		PCB-1221	ND
12P	96P		beta endosulfan	ND	21P	109P		PCB-1232	ND
14P	97P		endosulfan sulfate	ND	22P	110P		PCB-1248	ND
14P	98P		endrin	ND	23P	111P		PCB-1260	ND
15P	99P		enrin aldrin	ND	24P	112P		PCB-1016	ND
16P	100P		beta BHC	ND	9P	113P		toxaphene	ND
17P	101P		endosulfan sulfate	ND					

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SAMPLE ID 550155

Analytical Serv

Results by Sample

REPORT

LAB # 86-02-078

Continued From Above

FRACTION 04A TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS  
Date & Time Collected 02/12/85 Category

NOTES AND DEFINITIONS FOR THIS REPORT

0200 is scan number on chromatogram

All results reported in micrograms/liter unless otherwise specified

ND = not detected at EPA detection limit method 625, (Federal Register, 12/3/79)

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Analytical Serv

Results by Sample

LAB # 86-02-078

REPORT

SAMPLE ID 850152 Dup Analysis 88A

FRACTION 05B

TEST CODE M525 A NAME Method 625 Acid Compounds

Date & time Collected not specified

Category

DATA FILE 8020078005

DATE EXTRACTED 02/13/86

VERIFIED BY LAK

COMP FACTOR 1

DATE INJECTED 02/28/86

ANALYST INSTRUMENT

WJL

COMPOUNDS DETECTED 0

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
11A	21A	2,4,6-trichlorophenol	ND	7A	58A	4-nitrophenol	ND
2A	22A	4-chloro-3-methylphenol	ND	5A	59A	2,4-dinitrophenol	ND
1A	24A	2-chlorophenol	ND	4A	60A	2-methyl-4,6-dinitrophenol	ND
2A	31A	2,4-dichlorophenol	ND	9A	64A	pentachlorophenol	ND
3A	34A	2,4-dimethylphenol	ND	10A	65A	phenol	ND
6A	37A	3-nitrophenol	ND				

3 128

## RECOVERY RECOVERIES

SCAN	COMPOUND	RESULT
11A	4-nitrophenol	ND
2A	2,4-dinitrophenol	ND
1A	2-methyl-4,6-dinitrophenol	ND
2A	pentachlorophenol	ND
3A	phenol	ND

NOTES: ANALYST INITIALS FOR THIS REPORT

DATE: 02/13/86

ANALYST: LAK

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-078

Continued From Above

SAMPLE ID 850152 Dup Analysis DNA

FRACTION 05B

TEST CODE M525 A

NAME Method 625 Acid Compounds

Date & Time Collected not specified

Category

ND = not detected at EPA detection limit method 625, (Federal Register, 11/26/84).  
 BL = detected in reagent blank, background subtraction not performed.  
 U = estimated value; less than method detection limit  
 CONC FACTOR: indicates dilution of sample if greater than one (1). Minimum detection  
 limits should be multiplied by conc. factor

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ANALYST: JCS

REPORT

LAB # 86-02-078

Results by Sample

SAMPLE ID: 60152 Pop Analysis BNA

FRACTION: 05D

TEST CODE: MS25 B

NAME Method 625 Base/Neutrals

Date & Time Collected not specified

Category

DATA FILE		DATE EXTRACTED		ANALYST		WJL		VERIFIED BY	
6000		02/28/86		INSTRUMENT		FC		LAK	
1		02/28/86							
SCANS	CPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT	SCANS	CPA
12	12	acenaphthene	ND	410	616	N-nitrosodimethylamine	ND	12	12
48	48	benzidine	ND	430	626	N-nitrosodiphenylamine	ND	48	48
468	68	1,2,4-trichlorobenzene	ND	420	630	N-nitrosodi-n-propylamine	ND	468	68
336	68	hexachlorobenzene	ND	136	1674	bis(2-ethylhexyl)phthalate	3	336	68
258	128	hexachloroethane	ND	150	670	butyl benzyl phthalate	ND	258	128
112	168	bis(2-chloroethyl) ether	ND	260	1387	di-butyl phthalate	4 BL	112	168
168	208	2-chloronaphthalene	ND	270	690	di-n-octyl phthalate	ND	168	208
208	150	1,2-dichlorobenzene	ND	240	760	diethyl phthalate	ND	208	150
210	248	1,3-dichlorobenzene	ND	250	710	dimethyl phthalate	ND	210	248
210	270	1,4-dichlorobenzene	ND	30	720	benzo(a)anthracene A	ND	210	270
270	310	2,3-dichlorobenzidine	ND	40	740	benzocyclopene	ND	270	310
310	350	2,4-dichlorobenzidine	ND	6	810	benzo(b)fluoranthene A	ND	310	350
350	390	2,5-dichlorobenzidine	ND	70	820	benzo(k)fluoranthene A	ND	350	390
390	430	2,6-dichlorobenzidine	ND	120	830	benzofluorene A	ND	390	430
430	470	2,7-dichlorobenzidine	ND	130	840	benzophenylene	ND	430	470
470	510	2,8-dichlorobenzidine	ND	140	850	benzophenylene	ND	470	510



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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-078

Continued From Above

SAMPLE ID 850152 Dup Analysis BNA

FRACTION 05B

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected not specified

Category

148	418	4-bromophenyl phenyl ether	ND	88	79B	benzo(ghi)perylene	ND
158	428	bis(2-chloroisopropyl)ether	ND	32B	60B	fluorene	ND
108	438	bis(2-chloroethoxy)methane	ND	44B	81B	phenanthrene B	ND
348	528	hexachlorobutadiene	ND	19B	62B	dibenzo(a,h)anthracene	ND
258	528	hexachlorocyclopentadiene	ND	37B	62B	indeno(1,2,3-cd)pyrene	ND
388	548	isophorone	ND	45B	64B	pyrene	ND
398	558	naphthalene	ND				
408	568	nitrobenzene	ND				

## SURROGATE RECOVERIES

SCAN CODE	RESULT
601 B91	d5-nitrobenzene 91
622 B92	2-fluorobiphenyl 84
1484 B93	d14-terphenyl 164
554	d10-biphenyl

3 131

## NOTES AND LIMITATIONS FOR THIS REPORT

SCAN scan number or retention time on chromatogram  
 All results reported in this report are preliminary and  
 are not detected at EPA detection limit Method 625. Please Register, 10/26/84  
 A - benzo(a)fluoranthene and benzo(b)fluoranthene are not detected  
 A - benzo(a)anthracene and chrysene are not detected

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-078

Continued From Above

SAMPLE ID 860152 Dup Analysis BNA

FRACTION 05B

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected not specified

Category

2 = anthracene and phenanthrene co-elute in high concentrations.  
 Et = detected in reagent blank, background subtraction not performed.  
 U = estimated value, less than method detection limit.  
 CONC FACTOR: indicates dilution of sample if greater than one (1). Minimum detection  
 limits should be multiplied by conc. factor.

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RECEIVED 02/13/86

Analytical Serv

REPORT

Results by Sample

LAB # 86-02-078

NAME CCMS Characterization-ABN

Category

TEST CODE MSNS S

DATE & Time Collected not specified

UNIT 99/1

VERIFIED BY LAK

DATE ANALYZED 02/28/86

COMPOUND

SCAN

CONF LEVEL

REF

RESULT

COMPD

No PCB's

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-078

SAMPLE ID 850152 Dup Analysis BNA

FRACTION 05B

TEST CODE NS 608 NAME Pesticides & PCBs by GC/MS

Date & time Collected not specified

Category

DATA FILE 80002078C05

DATE EXTRACTED 02/13/86

ANALYST WJL

VERIFIED BY LAK  
COMPOUNDS DETECTED 0

CONC FACTOR

DATE INJECTED 02/28/86

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1P	84P	aldrin	ND	2P	102P	alpha BHC	ND
10P	90P	dieldrin	ND	3P	103P	beta BHC	ND
6P	91P	chlordane	ND	4P	104P	gamma BHC	ND
7P	92P	4,4'-DDT	ND	5P	105P	delta BHC	ND
8P	93P	4,4'-DDE	ND	18P	106P	PCB-1242	ND
9P	94P	4,4'-DDD	ND	19P	107P	PCB-1254	ND
11P	95P	alpha endosulfan	ND	20P	108P	PCB-1221	ND
12P	96P	beta endosulfan	ND	21P	109P	PCB-1232	ND
13P	97P	endosulfan sulfate	ND	22P	110P	PCB-1248	ND
14P	98P	endrin	ND	23P	111P	PCB-1260	ND
15P	99P	endrin aldehyde	ND	24P	112P	PCB-1016	ND
16P	100P	heptachlor epoxide	ND	25P	113P	toxaphene	ND

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Analytical Serv

REPORT

LAB # 86-02-078

Results by Sample

Continued From Above

SAMPLE ID 850152 Dup Analysis BNA

FRACTION 05B

TEST CODE MS 608

NAME Pesticides & PCBs by GC/MS

Date & Time Collected not specified

Category

NOTES AND DEFINITIONS FOR THIS REPORT

SCAN is scan number on chromatogram.

All results reported in micrograms/liter unless otherwise specified

ND is not detected at EPA detection limit method 625, (Federal Register, 12/3/79).

LAB # 86-02-078

ANALYTICAL DATA REPORT  
Results by Sample

SAMPLE ID 850105 Matrix Spike BSA FRACTION 204 TEST CODE M625 A NAME Method 625 Acid Compounds  
Date & Time Collected not specified Category

DATA FILE 8602070205 DATE EXTRACTED 02/13/86 ANALYST UJL VERIFIED BY LAK  
COR FACTOR 1 DATE INJECTED 02/28/86 INSTRUMENT 42 COMPOUNDS DETECTED 9

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
114	870	2,4,6-trichlorophenol	60	7A	1011	58A	4-nitrophenol 61
14	1011	4-chloro-3-methylphenol	64	9A	59A	2,4-dinitrophenol	ND
14	1591	2-chlorophenol	65	4A	1091	60A	2-methyl-4,6-dinitrophenol 32
2A	1091	2,4-dichlorophenol	55	9A	64A	pentachlorophenol	ND
3A	1228	2,4-dimethylphenol	35	10A	486	65A	phenol 60
14	1551	6-nitrophenol	54				

## 3 136

TEST CODE	COMPOUND	Result
870	4-nitrophenol	
1011	2-nitrophenol	
1591	2,4,6-trichlorophenol	
1091	4-nitrophenol	

NOTE: ADDITIONAL INFO FOR THIS REPORT

DATE: 02/13/86

ANALYST: UJL

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-078

Continued From Above

SAMPLE ID 850155 Nitroix Spike BNA

FRACTION 05A

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected not specified

Category

ND = not detected at EPA detection limit method 625, (Federal Register, 11/26/84).  
BL = detected in reagent blank, background subtraction not performed.  
J = estimated value, less than method detection limit  
CFR = FACTOR. Indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-078

SAMPLE ID 850155 Matrix Spike BNA

FRACTION 05A

TEST CODE M625 B NAME Method 625 Base/Neutrals

Date & Time Collected not specified

Category

DATA FILE 2002078005

DATE EXTRACTED 02/13/86

ANALYST

VERIFIED BY LAK

CORC FACTOR 1

DATE INJECTED 02/28/86

INSTRUMENT

COMPOUNDS DETECTED 45

NOES	SCAN	EPA	COMPOUND	RESULT	NPDES	SCAN	EPA	COMPOUND	RESULT
12	529	15	acenaphthene	77	41B	175	61B	N-nitrosodimethylamine	3
4B	1444	5B	benzidine	140	43B	1096	62B	N-nitrosodiphenylamine	96
45B	705	8B	1,2,4-trichlorobenzene	55	42B	585	63B	N-nitrosodi-n-propylamine	63
23B	1179	9B	hexachlorobenzene	74	13B	1678	66B	bis(2-ethylhexyl)phthalate	92
34B	595	12B	hexachloroethane	63	15B	1574	67B	butyl benzyl phthalate	50
11B	486	18B	bis(2-chloroethyl)ether	60	26B	1329	68B	di-butyl phthalate	81
14B	622	20B	2-chloronaphthalene	69	29B	1813	69B	di-n-octyl phthalate	88
20B	519	25B	1,2-dichlorobenzene	64	24B	1067	70B	diethyl phthalate	80
21B	515	26B	1,3-dichlorobenzene	62	25B	953	71B	dimethyl phthalate	77
22B	523	27B	1,4-dichlorobenzene	61	52	1661	72B	benzo(a)anthracene A	87
21B	1657	28B	3,3-dichlorobenzidine	71	6B	2001	73B	benzo(a)pyrene	81
27B	1035	35B	2,4-dinitrotoluene	60	73	1906	74B	benzo(b)fluoranthene *	83
26B	524	35B	2,6-dinitrotoluene	59	9B	1912	75B	benzo(k)fluoranthene *	70
34B	370	37B	1,2-diphenylhydrazine	64	16B	1662	76B	chrysene A	81
31B	1425	38B	fluoranthene	73	22	2659	77B	acenaphthylene	69
17B	1275	40B	4-chlorophenyl phenyl ether	60	3B	1227	79B	anthracene	84



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RECEIVED: 02/13/85

Analytical Serv

Results by Sample

REPORT

LAB # 86-02-078

Continued From Above

SAMPLE ID 950155 Matrix Spike BNA

FRACTION 05A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected not specified

Category

108	1154	418	4-bromophenyl phenyl ether	81	88	2585	79B	benzo(ghi)perylene	83
128	556	423	bis(2-chloroisopropyl)ether	68	32B	1076	80B	fluorene	79
108	676	438	bis(2-chloroethoxy)methane	62	44B	1230	81B	phenanthrene B	81
348	744	528	hexachlorobutadiene	56	19B	2468	82B	dibenzo(a,h)anthracene	82
358	859	538	hexachlorocyclopentadiene	7	37B	2453	83B	indeno(1,2,3-cd)pyrene	88
388	642	548	isophorone	62	45B	1461	84B	pyrene	89
398	714	558	naphthalene	61					
408	624	568	nitrobenzene	57					

## SURROGATE RECOVERIES

SCAN CODE	RESULT
801	851
802	852
803	853
804	854

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## NOTES AND REFINITIONS FOR THIS REPORT

SCAN is scan number or retention time on chromatogram  
 All results reported in % except unless otherwise specified  
 ND = not detected at EPA detection limit, method 825, (Federal Register, 10/26/84)  
 A = benzo(a)fluoranthene and benzo(k)fluoranthene co-elute  
 A = benzo(a)anthracene and chrysene co-elute - high concentrations

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-078

Continued From Above

SAMPLE ID 860155 Matrix Spike BNS

FRACTION 05A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected not specified

Category

B = anthracene and phenanthrene correlate in high concentrations.  
 BL = detected in reagent blank, background subtraction not performed.  
 V = estimated value, less than method detection limit.  
 CONC FACTOR indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-078

SAMPLE ID 850155 Matrix Spike BMS

FRACTION 05A

TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS

Date & time Collected not specified

Category

DATA FILE 20102028005  
COMP FACTOR

DATE EXTRACTED 02/13/85  
DATE INJECTED 02/20/85

ANALYST MJL

VERIFIED BY LAK  
COMPOUNDS DETECTED 0

NOVUS SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1P	89P	aldrin	ND	2P	102P	alpha BHC	ND
10P	90P	dieldrin	ND	3P	103P	beta BHC	ND
5P	91P	chlordane	ND	4P	104P	gamma BHC	ND
7P	92P	4,4'-DDT	ND	5P	105P	delta BHC	ND
6P	93P	4,4'-DDE	ND	16P	106P	PCB-1242	ND
3P	94P	4,4'-DDD	ND	19P	107P	PCB-1254	ND
11P	95P	alpha endosulfen	ND	20P	108P	PCB-1221	ND
12P	96P	beta endosulfen	ND	21P	109P	PCB-1232	ND
14P	97P	endosulfen sulfate	ND	22P	110P	PCB-1248	ND
13P	98P	andrin	ND	23P	111P	PCB-1260	ND
17P	99P	endrin aldehyde	ND	24P	112P	PCB-1016	ND
15P	100P	protection	ND	25P	113P	toxaphene	ND
16P	101P	gamma HCH	ND				

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-078

Continued From Above

SAMPLE ID 850155 Matrix Spike BNA

FRACTION 05A

TEST CODE MS 608

NAME Pesticides & PCBs by GC/MS

Date & Time Collected not specified

Category

NOTES AND DEFINITIONS FOR THIS REPORT

SCAN = scan number on chromatogram.

All results reported in micrograms/liter unless otherwise specified.

(ND) = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-078

SAMPLE ID reagent blank BNA

FRACTION Q5C

TEST CODE N625 A NAME Method 625 Acid Compounds

Date & time Collected not specified

Category

DATA FILE SCUG2077C03  
COND FACTOR 1

DATE EXTRACTED 02/13/85  
DATE INJECTED 02/28/85

ANALYST INSTRUMENT

WJL 5100

VERIFIED BY LAK  
COMPOUNDS DETECTED 1

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
11A	21A	2,4,6-trichlorophenol	ND	7A	58A	4-nitrophenol	ND
8A	22A	4-chloro-3-methylphenol	ND	5A	59A	2,4-dinitrophenol	ND
1A	23A	2-chlorophenol	ND	4A	60A	2-methyl-4,6-dinitrophenol	ND
2A	31A	2,4-dichlorophenol	ND	9A	64A	pentachlorophenol	ND
3A	34A	2,4-dimethylphenol	ND	10A	39B	phenol	1
5A	57A	2-nitrophenol	ND				

SUBSTRATE RECOVERIES

SCAN CODE	COMPOUND	RESULT
32A	47 phenol	1.0
33A	2-fluorophenol	1.0
34A	2,4,6-trichlorophenol	9
49A	40 phenol	

NOTES: 2000 PRELIMINARY FOR THIS REPORT

50A00 - Scan number of reagent blank collected on 02/29/85

All results reported in by 10:00 AM on 02/29/85

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-078

Continued From Above

SAMPLE ID reagent blank BNA

FRACTION 050

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected not specified

Category

ND = not detected at EPA detection limit method 625, (Federal Register, 11/26/84).  
 BL = detected in reagent blank, background subtraction not performed  
 U = estimated value, less than method detection limit.  
 CONC FACTOR indicates dilution of sample if greater than one (1). Minimum detection  
 limits should be multiplied by conc. factor

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-078

SAMPLE ID reagent blank DNA

FRACTION 050

TEST CODE MS25 B NAME Method 625 Base/Neutrals

Date & Time Collected not specified

Category

DATA FILE EQ0207003		DATE EXTRACTED 02/13/86		ANALYST		WJL		VERIFIED BY LAK	
CORC	FACTOR	DATE INJECTED	COMPOUND	NPDES SCAN	CPA	INSTRUMENT	9100	COMPOUNDS DETECTED	2
NPDES SCAN	CPA	COMPOUND	RESULT	NPDES	SCAN	CPA	COMPOUND	RESULT	
10	18	acenaphthene	ND	41B		61B	N-nitrosodimethylamine	ND	
48	58	benzidine	ND	43B	979	62B	N-nitrosodiphenylamine	6	
468	88	1,2,4-trichlorobenzene	ND	42B		63B	N-nitrosodi-n-propylamine	ND	
338	98	hexachlorobenzene	ND	13B		66B	bis(2-ethylhexyl)phthalate	ND	
268	108	hexachloroethane	ND	15B		67B	butyl benzyl phthalate	ND	
118	188	bis(2-chloroethyl)ether	ND	26B	1204	68B	di-butyl phthalate	2	
168	208	2-chloronaphthalene	ND	27B		69B	di-n-octyl phthalate	ND	
208	258	1,2-dichlorobenzene	ND	24B		70B	diethyl phthalate	ND	
318	262	1,3-dichlorobenzene	ND	25E		71B	dimethyl phthalate	ND	
328	27B	1,4-dichlorobenzene	ND	5B		72B	benzo(a)anthracene A	ND	
338	286	3,3-dichlorobenzidine	ND	6B		73B	benzo(a)pyrene	ND	
318	358	2,4-dinitrotoluene	ND	78		74B	benzo(b)fluoranthene *	ND	
388	368	2,6-dinitrotoluene	ND	98		75B	benzo(k)fluoranthene *	ND	
398	378	1,6-diphenylhydrazine	ND	18B		76B	chrysene A	ND	
318	448	fluoranthene	ND	28		77B	acenaphthylene	ND	
178	478	2-ethylphenyl phenyl ether	ND	48		78B	anthracene	ND	

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-078

Continued From Above

SAMPLE ID reagent blank BNA

FRACTION Q5C

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected not specified

Category

14B	41B	4-bromophenyl phenyl ether	ND	8B	79B	benzo(ghi)perylene	ND
12B	42B	bis(2-chloroisopropyl)ether	ND	32B	80B	fluorene	ND
10B	43B	bis(2-chloroethoxy)methane	ND	44B	81B	phenanthrene B	ND
34B	52B	hexachlorobutadiene	ND	19B	82B	dibenzo(a,h)anthracene	ND
35B	53B	hexachlorocyclopentadiene	ND	37B	83B	indeno(1,2,3-cd)pyrene	ND
38B	54B	isophorone	ND	45B	84B	pyrene	ND
39B	55B	naphthalene	ND				
40B	56B	nitrobenzene	ND				

SURROGATE RECOVERIES

SCAN CODE	RESULT
<u>513</u> B51	d5-nitrobenzene <u>134</u>
<u>774</u> B52	2-Fluorobiphenyl <u>124</u>
<u>1252</u> B53	d14-terphenyl <u>68</u>
B54	d10-biphenyl

3 146

NOTES AND DEFINITIONS FOR THIS REPORT

SCAN = scan number or retention time on chromatogram  
 All results reported in ug/L unless otherwise specified  
 ND = not detected at EPA detection limit method 625, (Federal Register, 10/26/84)  
 + = benzo(b)fluoranthene and benzo(k)fluoranthene co-elute  
 A = enzo(a)anthracene and chrysene co-elute, high concentrations



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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-078

Continued From Above

SAMPLE ID reagent blank BNA

FRACTION OSC

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected not specified

Category

3 = anthracene and phenanthrene co-elute in high concentrations.  
EL = detected in reagent blank; background subtraction not performed.  
U = estimated value, less than method detection limit  
CENC FACTOR indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-078

FRACTION 05C TEST CODE MSNS S NAME GCMS Characterization-ABN

Date & Time Collected not specified

Category

CHRD # 5002077003

SAMPLE SIZE 1

DATE ANALYZED 02/28/86

UNITS ug/l

VERIFIED BY LAK

SCAN

COMPOUND

RESULT

CONF LEVEL REF CMPD

No. PCB's

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Analytical Serv REPORT  
Results by Sample

LAB # 86-02-078

SAMPLE ID reagent blank BNA FRACTION 05C TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS  
Date & time Collected not specified Category

DATA FILE 50002077C03 DATE EXTRACTED 02/13/86 ANALYST MJL VERIFIED BY LAK  
CONC FACTOR DATE INJECTED 02/28/86 COMPOUNDS DETECTED 0

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1P	89P	aldrin	ND	2P	102P	alpha BHC	ND
10P	90P	dieldrin	ND	3P	103P	beta BHC	ND
5P	91P	chlordane	ND	4P	104P	gamma BHC	ND
7P	92P	4,4'-DDT	ND	5P	105P	delta BHC	ND
8P	93P	4,4'-DDE	ND	18P	106P	PCB-1242	ND
9P	94P	4,4'-DDD	ND	19P	107P	PCB-1254	ND
11P	95P	alpha endosulfan	ND	20P	108P	PCB-1221	ND
13P	96P	beta endosulfan	ND	21P	109P	PCB-1232	ND
14P	97P	endosulfan sulfate	ND	22P	110P	PCB-1248	ND
14P	98P	endrin	ND	23P	111P	PCB-1260	ND
15P	99P	endrin aldehyde	ND	24P	112P	PCB-1016	ND
16P	100P	heptachlor	ND	25P	113P	toxaphene	ND
17P	101P	heptachlor epoxide	ND				

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-078

Continued From Above

SAMPLE ID reagent blank DNA

FRACTION Q5C

TEST CODE MS 608

NAME Pesticides & PCBs by GC/MS

Date & Time Collected not specified

Category

NOTES AND DEFINITIONS FOR THIS REPORT

SCAN = scan number on chromatogram.

All results reported in micrograms/liter unless otherwise specified.

ND = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).

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Analytical Serv

REPORT

LAB # 86-02-078

NonReported Work

FRACTION AND TEST CODES FOR WORK NOT REPORTED ELSEWHERE

01B : DUP\_INS  
02B : DUP\_INS  
03B : DUP\_INS  
04B : DUP\_INS

PAGE 1

RECEIVED: 02/13/86

Analytical Serv

REPORT

LAB # 86-02-079

03/18/86 14:05:07

REPORT Radian  
TO BL 4  
Austin

ATTEN Larry French

CLIENT PLANT4 SAMPLES 7  
COMPANY Plant 4  
FACILITY Carswell AFB (Gen. Dynamics)

PREPARED Radian Analytical Services  
BY 8501 MoPac Blvd  
P.O. Box 9948  
Austin, Texas 78766  
ATTEN  
PHONE (512) 454-4797

CERTIFIED BY

CONTACT CONOVER

WORK ID groundwater  
TAKEN AM  
TRANS Fed Ex  
TYPE  
P.O. # 212-027-27-40  
INVOICE under separate cover

Footnotes and Comments

- \* Indicates a value less than 5 times the detection limit. Potential error for such low values ranges between 50 and 100%.
- @ Indicates that spike recovery for this analysis on the specific matrix was not within acceptable limits indicating an interferent present.

**SAMPLE IDENTIFICATION**

01	860152
02	860153
03	860154
04	860155
05	860156
06	860157
07	860158

**Analytical Serv TEST CODES and NAMES used on this report**

AG E	Silver, ICPEs
AS GA	Arsenic, low level
BA E	Barium, ICPEs
CD E	Cadmium, ICPEs
CR E	Chromium, ICPEs
DG3020	Digestion by Method 3020
DG6010	Digestion by Method 6010
HC IR	Hydrocarbons
HG CA	Mercury, Cold Vapor
ONG IR	Oil and Grease, Infrared
PB GA	Lead, low level
SE GA	Selenium, low level

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RECEIVED: 02/13/86  
Analytical Serv REPORT  
RESULTS BY TEST LAB # 86-02-079

TEST CODE	Sample 01 (entered units)	Sample 02 (entered units)	Sample 03 (entered units)	Sample 04 (entered units)	Sample 05 (entered units)
AG E ug/ml	0.008*	<.002	<.002	<.002	
AS GA ug/ml	0.011	0.007*	<.002	<.002	
BA E ug/ml	0.032	0.062	0.068	0.46	
CD E ug/ml	<.002	<.002	<.002	<.002	
CR E ug/ml	0.016*	0.008*	0.006*	<.005	
DG3020 date complete	02/17/86	02/17/86	02/17/86	02/17/86	
DG6010 date complete	02/18/86	02/18/86	02/18/86	02/18/86	
HC IR mg/L	<.0002	<.0002	<.0002	<.0002	<1
HG CA ug/ml					
ONG IR mg/L					<1
PB GA ug/ml	0.048	<.002	<.002	<.002	
SE GA ug/ml	<.003	<.003	<.003	<.003	

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Analytical Serv  
RESULTS BY TEST

LAB # 86-02-079

TEST CODE	Sample 06	Sample 07
default units	(entered units)	(entered units)
HC IR	<1	<1
mg/L		
ONG IR	<1	<1
mg/L		



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RECEIVED: 02/14/86

Analytical Serv

03/19/86 15:05:35

REPORT

LAB # 86-02-087

REPORT Radian  
TO BL 4  
Austin  
ATTEN Larry French  
CLIENT PLANT 4  
COMPANY Plant 4  
FACILITY Carswell AFB (Gen. Dynamics)

PREPARED Radian Analytical Services  
BY B501 MoPac Blvd.  
P.O. Box 9948  
Austin, Texas 78766  
ATTEN  
PHONE (512) 454-4797

*Carl S. Smith*  
CERTIFIED BY

CONTACT CONOVER

SAMPLES 6  
WORK ID groundwater  
TAKEN NR. AM  
TRANS Fed Ex  
TYPE  
P.O. # 212-027-27-40  
INVOICE under separate cover

\*\*Unknown compound eluting here.

Second column confirmation performed for EPA 601 on -01,  
-04, -05; for EPA 602 on -04.

## Footnotes and Comments

\* Indicates a value less than 5 times the detection limit.  
Potential error for such low values ranges between  
50 and 100%.

@ Indicates that spike recovery for this analysis on the  
specific matrix was not within acceptable limits indicating  
an interferent present.

## SAMPLE IDENTIFICATION

01 860159  
02 860160  
03 860161  
04 860162  
05 860163  
06 field blank

## Analytical Serv TEST CODES and NAMES used on this report

AG E Silver, ICPES  
AS GA Arsenic, low level  
BA E Barium, ICPES  
CD E Cadmium, ICPES  
CR E Chromium, ICPES  
DG3020 Digestion by Method 3020  
DG6010 Digestion by Method 6010  
GC 601 EPA Method 601/GC  
GC 602 EPA Method 602/GC  
HC IR Hydrocarbons  
HG CA Mercury, Cold Vapor  
ONG IR Oil and Grease, Infrared  
PB GA Lead, low level  
SE GA Selenium, low level

PAGE 2  
RECEIVED: 02/14/86  
Analytical Serv  
REPORT  
RESULTS BY TEST  
LAB # 86-02-087

TEST CODE	Sample 01	Sample 02	Sample 03	Sample 04	Sample 05
default units	(entered units)	(entered units)	(entered units)	(entered units)	(entered units)
AG E				0.004*	<.002
ug/ml					
AS GA				0.038	<.002
ug/ml					
BA E				0.11	0.087
ug/ml					
CD E				<.002	<.002
ug/ml					
CR E				0.016*	<.005
ug/ml					
DG3020				02/17/86	02/17/86
date complete					
DG6010				02/18/86	02/18/86
date complete					
HC IR	<1	<1	<1		
mg/L					
HG CA				<.0002	<.0002
ug/ml					
ONG IR	<1	<1			
mg/L					
PB GA				0.006*	<.002e
ug/ml					
SE GA				<.003e	<.003e
ug/ml					

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RECEIVED: 02/14/86

Analytical Serv

Results by Sample

REPORT

LAB # 86-02-087

SAMPLE ID 860159

FRACTION 01C

TEST CODE GC 601

NAME EPA Method 601/GC

Date & Time Collected 02/13/86

Category

DATA FILE \_\_\_\_\_ B \_\_\_\_\_ DATE INJECTED 02/14/86

CONC. FACTOR \_\_\_\_\_ ANALYST \_\_\_\_\_ RP \_\_\_\_\_ VERIFIED BY MCL \_\_\_\_\_  
COMPOUNDS DETECTED 2

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
_____	Chloromethane	ND	2	Trichloroethene	29.2
_____	Bromomethane	ND	_____	Dibromochloromethane *	ND
_____	Vinyl Chloride	ND	_____	1,1,2-Trichloroethane *	ND
_____	Chloroethane	ND	_____	cis-1,3-Dichloropropene *	ND
_____	Methylene Chloride	ND	_____	2-Chloroethylvinyl Ether	ND
_____	Trichlorofluoromethane	ND	_____	Bromoform	ND
_____	1,1-Dichloroethene	ND	_____	1,1,2,2-Tetrachloroethane #	ND
_____	1,1-Dichloroethane	ND	_____	Tetrachloroethylene #	ND
1	trans-1,2-Dichloroethene	0.21**	_____	Chlorobenzene	ND
_____	Chloroform	ND	_____	1,3-Dichlorobenzene	ND
_____	1,2-Dichloroethane	ND	_____	1,2-Dichlorobenzene	ND
_____	1,1,1-Trichloroethane	ND	_____	1,4-Dichlorobenzene	ND
_____	Carbon Tetrachloride	ND			
_____	Bromodichloromethane	ND			
_____	1,2-Dichloropropane	ND			
_____	trans-1,3-Dichloropropene	ND			

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RECEIVED: 02/14/86

Analytical Serv

Results by Sample

REPORT

LAB # 86-02-087

Continued From Above

SAMPLE ID 860159

FRACTION 01C

TEST CODE GC 601

NAME EPA Method 601/GC

Date & Time Collected 02/13/86

Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

All results reported in ug/L unless otherwise specified.

ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79).

\*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.

#1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

PAGE 5

Analytical Serv REPORT

RECEIVED: 02/14/86

Results by Sample

SAMPLE ID 860159

FRACTION 01E TEST CODE GC 602 NAME EPA Method 602/GC

Date & Time Collected 02/13/86 Category

DATA FILE        D DATE INJECTED 02/14/86 ANALYST        RP VERIFIED BY MCL  
CONC. FACTOR        INSTRUMENT        d COMPOUNDS DETECTED       

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
<u>      </u>	Benzene	<u>ND</u>	<u>      </u>	1,4-Dichlorobenzene	<u>ND</u>
<u>1</u>	Toluene	<u>1.79</u>	<u>      </u>	1,3-Dichlorobenzene	<u>ND</u>
<u>      </u>	Ethyl Benzene	<u>ND</u>	<u>      </u>	1,2-Dichlorobenzene	<u>ND</u>
<u>      </u>	Chlorobenzene	<u>ND</u>	<u>      </u>		

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

All results reported in        ug/L unless otherwise specified.

ND = not detected at EPA detection limit method 602, (Federal Register, 12/3/79).

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Analytical Serv  
Results by Sample

LAB # 86-02-087

SAMPLE ID 860160

FRACTION 02C

TEST CODE GC 601

NAME EPA Method 601/GC

Date & Time Collected 02/13/86

Category

DATA FILE	B	DATE INJECTED	02/14/86	ANALYST	RP	VERIFIED BY	MCL
CONC. FACTOR				INSTRUMENT	b	COMPOUNDS DETECTED	C
SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT		
	Chloromethane	ND		Trichloroethene	ND		
	Bromomethane	ND		Dibromochloromethane *	ND		
	Vinyl Chloride	ND		1,1,2-Trichloroethane *	ND		
	Chloroethane	ND		cis-1,3-Dichloropropene *	ND		
	Methylene Chloride	ND		2-Chloroethylvinyl Ether	ND		
	Trichlorofluoromethane	ND		Bromoform	ND		
	1,1-Dichloroethene	ND		1,1,2,2-Tetrachloroethane #	ND		
	1,1-Dichloroethane	ND		Tetrachloroethylene #	ND		
	trans-1,2-Dichloroethene	ND		Chlorobenzene	ND		
	Chloroform	ND		1,3-Dichlorobenzene	ND		
	1,2-Dichloroethane	ND		1,2-Dichlorobenzene	ND		
	1,1,1-Trichloroethane	ND		1,4-Dichlorobenzene	ND		
	Carbon Tetrachloride	ND					
	Bromodichloromethane	ND					
	1,2-Dichloropropane	ND					
	trans-1,3-Dichloropropene	ND					

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ANALYTICAL SERV REPORT  
Results by Sample  
LAB # 86-02-087  
Continued From Above  
SAMPLE ID 860160  
FRACTION 02C TEST CODE GC 601 NAME EPA Method 601/GC  
Date & Time Collected 02/13/86 Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.  
All results reported in ug/L unless otherwise specified.  
ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79).  
\*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.  
#1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

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Analytical Serv  
Results by Sample

LAB # 86-02-037

SAMPLE ID 860160  
FRACTION 02E  
TEST CODE GC 602  
NAME EPA Method 602/GC  
Date & Time Collected 02/13/86  
Category

DATA FILE \_\_\_\_\_ D \_\_\_\_\_ DATE INJECTED 02/14/86  
CONC. FACTOR \_\_\_\_\_ ANALYST \_\_\_\_\_ RP \_\_\_\_\_ VERIFIED BY MCL  
INSTRUMENT \_\_\_\_\_ d \_\_\_\_\_ COMPOUNDS DETECTED 1

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
_____	Benzene	ND ;	_____	1,4-Dichlorobenzene	ND
_____	Toluene	0.99 ;	_____	1,3-Dichlorobenzene	ND
_____	Ethyl Benzene	ND ;	_____	1,2-Dichlorobenzene	ND
_____	Chlorobenzene	ND ;			

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NOTES AND DEFINITIONS FOR THIS REPORT.  
SCAN = scan number or retention time on chromatogram.  
All results reported in ug/L unless otherwise specified.  
ND = not detected at EPA detection limit method 602, (Federal Register, 12/3/79).



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Analytical Serv  
Results by Sample

LAB # 86-02-087

SAMPLE ID 860162

FRACTION 04B

TEST CODE GC 601

NAME EPA Method 601/GC

Date & Time Collected 02/13/86

Category

DATA FILE \_\_\_\_\_ B DATE INJECTED 02/14/86

CONC. FACTOR \_\_\_\_\_ ANALYST \_\_\_\_\_ RP \_\_\_\_\_ VERIFIED BY MCL  
INSTRUMENT \_\_\_\_\_ b COMPOUNDS DETECTED 5

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
---	Chloromethane	ND	---	Trichloroethene	ND
---	Bromomethane	ND	---	Dibromochloromethane *	ND
1	Vinyl Chloride	55.6	---	1,1,2-Trichloroethane *	ND
---	Chloroethane	ND	---	cis-1,3-Dichloropropene *	ND
2	Methylene Chloride	2.22	---	2-Chloroethylvinyl Ether	ND
---	Trichlorofluoromethane	ND	---	Bromoform	ND
---	1,1-Dichloroethene	ND	---	1,1,2,2-Tetrachloroethane #	ND
3	1,1-Dichloroethane	4.23	---	Tetrachloroethylene #	ND
4	trans-1,2-Dichloroethene	11.4	---	Chlorobenzene	ND
---	Chloroform	ND	---	1,3-Dichlorobenzene	ND
---	1,2-Dichloroethane	ND	5	1,2-Dichlorobenzene	14.2
---	1,1,1-Trichloroethane	ND	---	1,4-Dichlorobenzene	ND
---	Carbon Tetrachloride	ND			
---	Bromodichloromethane	ND			
---	1,2-Dichloropropene	ND			
---	trans-1,3-Dichloropropene	ND			

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RECEIVED: 02/14/86  
SAMPLE ID 860162

Analytical Serv  
Results by Sample

REPORT  
Continued From Above

LAB # 86-02-087

FRACTION 04B TEST CODE GC 601 NAME EPA Method 601/GC  
Date & Time Collected 02/13/86 Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.  
All results reported in ug/L unless otherwise specified.  
ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79).  
\*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.  
#1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-087

SAMPLE ID 860162

FRACTION 04D

TEST CODE GC 602

NAME EPA Method 602/GC

Date & Time Collected 02/13/86

Category

DATA FILE

D

DATE INJECTED 02/14/86

ANALYST

RP

VERIFIED BY MCL

CONC. FACTOR

INSTRUMENT

d

COMPOUNDS DETECTED

4

SCAN

COMPOUND

RESULT

SCAN

COMPOUND

RESULT

1

Benzene

60.7

1,4-Dichlorobenzene

ND

3 165

2

Toluene

70.7

1,3-Dichlorobenzene

ND

3

Ethyl Benzene

585

4

1,2-Dichlorobenzene

44.0

Chlorobenzene

ND

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

All results reported in ug/L unless otherwise specified.

ND = not detected at EPA detection limit method 602, (Federal Register, 12/3/79).

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-087

SAMPLE ID 860163

FRACTION 05B

TEST CODE GC 601

NAME EPA Method 601/GC

Date & Time Collected 02/13/86

Category

DATA FILE \_\_\_\_\_ G \_\_\_\_\_

DATE INJECTED 02/15/86

ANALYST \_\_\_\_\_

RP \_\_\_\_\_

VERIFIED BY MCL

CONC. FACTOR \_\_\_\_\_

INSTRUMENT \_\_\_\_\_

g \_\_\_\_\_

COMPOUNDS DETECTED 1

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
—	Chloromethane	ND	1	Trichloroethene	177
—	Bromomethane	ND	—	Dibromochloromethane *	ND
—	Vinyl Chloride	ND	—	1,1,2-Trichloroethane *	ND
—	Chloroethane	ND	—	cis-1,3-Dichloropropene *	ND
—	Methylene Chloride	ND	—	2-Chloroethylvinyl Ether	ND
—	Trichlorofluoromethane	ND	—	Bromoform	ND
—	1,1-Dichloroethene	ND	—	1,1,2,2-Tetrachloroethane #	ND
—	1,1-Dichloroethane	ND	—	Tetrachloroethylene #	ND
—	trans-1,2-Dichloroethene	ND	—	Chlorobenzene	ND
—	Chloroform	ND	—	1,3-Dichlorobenzene	ND
—	1,2-Dichloroethane	ND	—	1,2-Dichlorobenzene	ND
—	1,1,1-Trichloroethane	ND	—	1,4-Dichlorobenzene	ND
—	Carbon Tetrachloride	ND	—		
—	Bromodichloromethane	ND	—		
—	1,2-Dichloropropane	ND	—		
—	trans-1,3-Dichloropropene	ND	—		

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 SAMPLE ID 860163  
 Analytical Serv Results by Sample  
 REPORT  
 LAB # 86-02-087  
 Continued From Above  
 FRACTION 05B TEST CODE GC 601 NAME EPA Method 601/GC  
 Date & Time Collected 02/13/86 Category \_\_\_\_\_

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.  
 All results reported in ug/L unless otherwise specified.  
 ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79).  
 \*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.  
 #1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

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Analytical Serv  
Results by Sample

LAB # 86-02-087

SAMPLE ID 860163

FRACTION 05D TEST CODE GC 602 NAME EPA Method 602/GC  
Date & Time Collected 02/13/86 Category

DATA FILE \_\_\_\_\_ D \_\_\_\_\_ DATE INJECTED 02/14/86 ANALYST \_\_\_\_\_ RP \_\_\_\_\_ VERIFIED BY MCL  
CONC. FACTOR \_\_\_\_\_ INSTRUMENT \_\_\_\_\_ d \_\_\_\_\_ COMPOUNDS DETECTED 1

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
	Benzene	ND		1,4-Dichlorobenzene	ND
3	Toluene	0.78		1,3-Dichlorobenzene	ND
168	Ethyl Benzene	ND		1,2-Dichlorobenzene	ND
	Chlorobenzene	ND			

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

All results reported in \_\_\_\_\_ ug/L unless otherwise specified.

ND = not detected at EPA detection limit method 602, (Federal Register, 12/3/79)

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-087

SAMPLE ID field blank

FRACTION 06A

TEST CODE GC 601 NAME EPA Method 601/GC

Date & time Collected not specified

Category

DATA FILE	G	DATE INJECTED	02/15/86	ANALYST	RP	VERIFIED BY	MCL
CONC. FACTOR				INSTRUMENT	g	COMPOUNDS DETECTED	0
SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT		
	Chloromethane	ND			Trichloroethane	ND	
	Bromomethane	ND			Dibromochloromethane *	ND	
	Vinyl Chloride	ND			1,1,2-Trichloroethane *	ND	
	Chloroethane	ND			cis-1,3-Dichloropropene *	ND	
	Methylene Chloride	ND			2-Chloroethylvinyl Ether	ND	
	Trichlorofluoromethane	ND			Bromoform	ND	
	1,1-Dichloroethene	ND			1,1,2,2-Tetrachloroethane #	ND	
	1,1-Dichloroethane	ND			Tetrachloroethylene #	ND	
	trans-1,2-Dichloroethene	ND			Chlorobenzene	ND	
	Chloroform	ND			1,3-Dichlorobenzene	ND	
	1,2-Dichloroethane	ND			1,2-Dichlorobenzene	ND	
	1,1,1-Trichloroethane	ND			1,4-Dichlorobenzene	ND	
	Carbon Tetrachloride	ND					
	Bromodichloromethane	ND					
	1,2-Dichloropropane	ND					
	trans-1,3-Dichloropropene	ND					

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ANALYTICAL SERV REPORT  
Results by Sample  
LAB # 86-02-087  
Continued From Above  
SAMPLE ID field blank FRACTION 06A TEST CODE GC 601 NAME EPA Method 601/GC  
Date & Time Collected not specified Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.  
All results reported in ug/L unless otherwise specified.  
ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79).  
\*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.  
#1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.



NO-A190 443

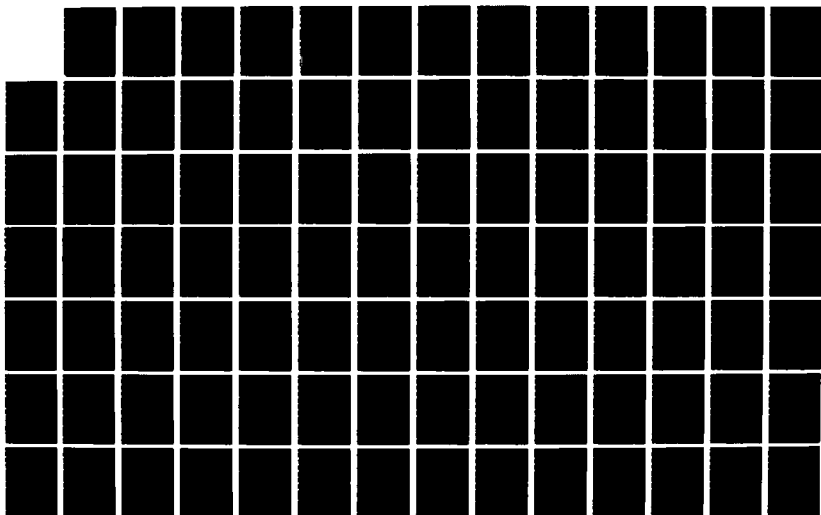
INSTALLATION RESTORATION PROGRAM PHASE 2  
CONFIRMATION/QUANTIFICATION STAG (U) RADIAN CORP  
AUSTIN TX DEC 87 F33615-83-D-4801

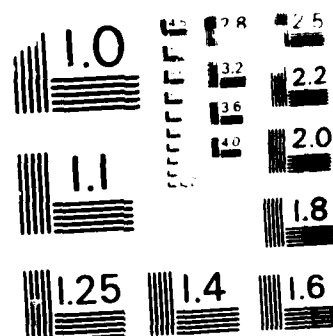
3/6

UNCLASSIFIED

F/G 24/7

NL





MIL-STD-151 RESOLUTION TEST CHART  
 NATIONAL BUREAU OF STANDARDS - 1963

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Analytical Serv REPORT  
Results by Sample

LAB # 86-02-087

SAMPLE ID field blank

FRACTION 06B

TEST CODE GC 602 NAME EPA Method 602/GC

Date & time Collected not specified

Category

DATA FILE D DATE INJECTED 02/14/86 ANALYST RP VERIFIED BY MCL  
CONC. FACTOR 1 INSTRUMENT d COMPOUNDS DETECTED 1

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
—	Benzene	ND :	—	1,4-Dichlorobenzene	ND
1	Toluene	3.33 :	—	1,3-Dichlorobenzene	ND
—	Ethyl Benzene	ND :	—	1,2-Dichlorobenzene	ND
—	Chlorobenzene	ND :	—		

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NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

All results reported in ug/L unless otherwise specified.

ND = not detected at EPA detection limit method 602, (Federal Register, 12/3/79)

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Analytical Serv

NonReported Work

REPORT

LAB # 86-02-087

FRACTION AND TEST CODES FOR WORK NOT REPORTED ELSEWHERE

01D	:	DUP601	01F	:	DUP602
02D	:	DUP601	02F	:	DUP602
04C	:	DUP601	04E	:	DUP602
05C	:	DUP601	05E	:	DUP602

# RADIAN CORPORATION

PAGE 1

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Analytical Serv

REPORT

03/12/86 08:59:45

LAB # 86-02-091

REPORT Radian Corporation  
10 Larry French  
Austin, Texas

PREPARED Radian Analytical Services  
BY 8501 MoPac Blvd  
P.O. Box 9948  
Austin, Texas 78760

ATTEN

ATTEN

PHONE (512) 454-4797

CONTACT FRENCH

CLIENT PLANT 4  
COMPANY General Dynamics  
FACILITY DEHL Plant 4, Bldg 4  
Austin, Texas

SAMPLES 3

WORK ID General Dynamics Ft. Worth

TAKEN 2/13/86

TRANS Federal 22021112

TYPE HQ (625 only)

P.O. # 212-027-27-40

INVOICE under separate cover

## Footnotes and Comments

\* Indicates a value less than 5 times the detection limit  
Potential error for such low values ranges between  
50 and 100%.

@ Indicates that spike recovery for this analysis on the  
specific matrix was not within acceptable limits indicating  
an interferent present.

## SAMPLE IDENTIFICATION

01 850162

02 850163

03 LEADENB Blank BNA

## Analytical Serv TEST CODES and NAMES used on this report

EX 625 Extraction only - 625 BNA

M625 A Method 625 Acid Compounds

M625 B Method 625 Base/Neutrals

MSNS S GCMS Characterization-ADH

MS 608 Pesticides & PCBs by GC/MS

# RADIAN CORPORATION

LAB # 86-02-091

REPORT

Analytical Serv

RESULTS BY TEST

PAGE 2

RECEIVED 02/14/86

TEST CODE	Sample 01	Sample 02	Sample 03
default units	(entered units)	(entered units)	(entered units)
EX 625	02/17/85	02/17/86	02/17/86
date complete			

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-091

SAMPLE ID 860162

FRACTION 01A

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected 02/13/86

Category

DATA FILE SCU0291C01  
CONC. FACTOR 1

DATE EXTRACTED 02/17/86  
DATE INJECTED 03/05/86

ANALYST  
INSTRUMENT

WJL  
5100

VERIFIED BY LAK  
COMPOUNDS DETECTED 2

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
11A	21A	2,4,6-trichlorophenol	ND	7A	58A	4-nitrophenol	ND
8A	22A	4-chloro-3-methylphenol	ND	5A	59A	2,4-dinitrophenol	ND
1A	24A	2-chlorophenol	ND	4A	60A	2-methyl-4,6-dinitrophenol	ND
2A	31A	2,4-dichlorophenol	ND	9A	64A	pentachlorophenol	ND
3A	559	2,4-dimethylphenol	68	10A	399	phenol	2
6A	57A	2-nitrophenol	ND				

SURROGATE RECOVERIES

SCAN CODE	COMPOUND	RESULT
397 AS1	d5-phenol	72
292 AS2	2-fluorophenol	67
998 AS3	2,4,6-tribromophenol	121
399 AS4	d3-phenol	2

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.  
All results reported in ug/l unless otherwise specified.

**CORPORATION**

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-091

Continued From Above

SAMPLE ID 860162

FRACTION 01A

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected 02/13/86

Category

ND = not detected at EPA detection limit method 625, (Federal Register, 11/26/84).

BL = detected in reagent blank; background subtraction not performed.

J = estimated value; less than method detection limit.

CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.



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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-091

SAMPLE ID 860162

FRACTION 01A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/13/86

Category

DATA FILE SCU02091C01  
CONC. FACTOR 1

DATE EXTRACTED 02/17/86  
DATE INJECTED 03/05/86

ANALYST  
INSTRUMENT

WJL  
5100

VERIFIED BY LAK  
COMPOUNDS DETECTED 6

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1B	832	13	acenaphthene	2	41B	61B	N-nitrosodimethylamine
4B		5B	benzidine	ND	43B	62B	N-nitrosodiphenylamine
46B		85	1,2,4-trichlorobenzene	ND	42B	63B	N-nitrosodi-n-propylamine
33B		9B	hexachlorobenzene	ND	13B	1533	bis(2-ethylhexyl)phthalate
36B		12B	hexachloroethane	ND	15B	67B	butyl benzyl phthalate
11B		18B	bis(2-chloroethyl)ether	ND	26B	1204	di-butyl phthalate
16B		20B	2-chloronaphthalene	ND	29B	69B	di-n-octyl phthalate
20B	464	25B	1,2-dichlorobenzene	23	24B	70B	diethyl phthalate
21B		26B	1,3-dichlorobenzene	ND	25B	71B	dimethyl phthalate
22B	440	27B	1,4-dichlorobenzene	3	5B	72B	benzo(a)anthracene A
23B		28B	3,3'dichlorobenzidine	ND	6B	73B	benzo(a)pyrene
27B		35B	2,4-dinitrotoluene	ND	7B	74B	benzo(b)fluoranthene *
28B		36B	2,6-dinitrotoluene	ND	9B	75B	benzo(k)fluoranthene *
29B		37B	1,2-diphenylhydrazine	ND	18B	76B	chrysene A
31B		39B	fluoranthene	ND	2B	77B	acenaphthylene
17B		40B	4-chlorophenyl phenyl ether	ND	3B	78B	anthracene B

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-091

Continued From Above

SAMPLE ID 860162

FRACTION 01A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/13/86

Category

148	41B	4-bromophenyl phenyl ether	ND	88	79B	benzo(ghi)perylene	ND
128	42B	bis(2-chloroisopropyl)ether	ND	328	80B	fluorene	ND
108	43B	bis(2-chloroethoxy)methane	ND	448	81B	phenanthrene B	ND
348	52B	hexachlorobutadiene	ND	198	82B	dibenzo(a,h)anthracene	ND
358	53B	hexachlorocyclopentadiene	ND	378	83B	indeno(1,2,3-cd)pyrene	ND
388	54B	isophorone	ND	458	84B	pyrene	ND
398	615	naphthalene	16				
408	56B	nitrobenzene	ND				

SURROGATE RECOVERIES

SCAN CODE	RESULT
3	d5-nitrobenzene 100
178	2-fluorobiphenyl 86
	d14-terphenyl 40
	d10-biphenyl

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.  
 All results reported in ug/l unless otherwise specified.  
 ND = not detected at EPA detection limit method 625, (Federal Register, 10/26/84).  
 + = benzo(b)fluoranthene and benzo(k)fluoranthene co-elute.  
 A = benzo(a)anthracene and chrysene co-elute in high concentrations.

ANALYTICAL SERVICE CORPORATION

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-091

Continued From Above

SAMPLE ID 860162

FRACTION 01A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/13/86

Category

B = anthracene and phenanthrene co-elute in high concentrations.  
BL = detected in reagent blank; background subtraction not performed.  
J = estimated value; less than method detection limit.  
CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

**ENVIRONMENTAL  
CORPORATION**

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Analytical Serv REPORT

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Results by Sample

SAMPLE ID 860162

FRACTION 01A

TEST CODE MSNS S NAME GCMS Characterization-ABN

Date & Time Collected 02/13/86

Category

CHRO # 5U02091C01  
SAMPLE SIZE 1

DATE ANALYZED 03/05/86

UNITS ug/l

VERIFIED BY LAK

SCAN	COMPOUND	RESULT	CONF LEVEL	REF CMPD
No PCB's detected				

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-091

SAMPLE ID 860162

FRACTION 01A TEST CODE MS 608

NAME Pesticides & PCBs by GC/MS

Date & Time Collected 02/13/86

Category

DATA FILE SCU02091C01  
CONC. FACTOR

DATE EXTRACTED 02/17/86  
DATE INJECTED 03/05/86

ANALYST WJL

VERIFIED BY LAK  
COMPOUNDS DETECTED 0

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1P	89P	aldrin	ND	2P	102P	alpha BHC	ND
10P	90P	dieldrin	ND	3P	103P	beta BHC	ND
6P	91P	chlordane	ND	4P	104P	gamma BHC	ND
7P	92P	4,4'-DDT	ND	5P	105P	delta BHC	ND
8P	93P	4,4'-DDE	ND	18P	106P	PCB-1242	ND
9P	94P	4,4'-DDD	ND	19P	107P	PCB-1254	ND
11P	95P	alpha endosulfan	ND	20P	108P	PCB-1221	ND
12P	96P	beta endosulfan	ND	21P	109P	PCB-1232	ND
14P	97P	endosulfan sulfate	ND	22P	110P	PCB-1248	ND
14P	98P	endrin	ND	23P	111P	PCB-1260	ND
15P	99P	endrin aldehyde	ND	24P	112P	PCB-1016	ND
16P	100P	heptachlor	ND	25P	113P	toxaphene	ND
17P	101P	heptachlor epoxide	ND				

**EXAMINATION  
CORPORATION**

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-091

Continued From Above

SAMPLE ID 860162

FRACTION Q1A TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS

Date & Time Collected 02/13/86

Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number on chromatogram.

All results reported in micrograms/liter unless otherwise specified.

ND = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).

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REPORT

Results by Sample

LAB # 86-02-091

SAMPLE ID 860163

FRACTION 02A

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected 02/13/86

Category

DATA FILE 5CU02091C02  
CONC. FACTOR 1

DATE EXTRACTED 02/17/86  
DATE INJECTED 03/05/86

ANALYST  
INSTRUMENT 5100

VERIFIED BY LAK  
COMPOUNDS DETECTED 1

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
11A	21A	2,4,6-trichlorophenol	ND	7A	58A	4-nitrophenol	ND
8A	22A	4-chloro-3-methylphenol	ND	5A	59A	2,4-dinitrophenol	ND
1A	24A	2-chlorophenol	ND	4A	60A	2-methyl-4,6-dinitrophenol	ND
2A	31A	2,4-dichlorophenol	ND	9A	64A	pentachlorophenol	ND
3A	34A	2,4-dimethylphenol	ND	10A	399 65A	phenol	2
6A	57A	2-nitrophenol	ND				

3 1 003

**SURROGATE RECOVERIES**

SCAN CODE	COMPOUND	RESULT
398 AS1	d5-phenol	77
294 AS2	2-fluorophenol	77
998 AS3	2,4,6-tribromophenol	111
AS4	d3-phenol	

**NOTES AND DEFINITIONS FOR THIS REPORT**

SCAN = scan number or retention time on chromatogram.  
All results reported in ug/l unless otherwise specified.

ENVIRONMENTAL  
CORPORATION

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-091

Continued From Above

SAMPLE ID 860163

FRACTION 02A

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected 02/13/86

Category

ND = not detected at EPA detection limit method 625, (Federal Register, 11/26/84).  
BL = detected in reagent blank; background subtraction not performed.  
J = estimated value; less than method detection limit.  
CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection  
limits should be multiplied by conc. factor.



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Results by Sample

REPORT

LAB # 86-02-091

SAMPLE ID 860163

FRACTION 02A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/13/86

Category

DATA FILE 50002091C02  
CONC. FACTOR 1

DATE EXTRACTED 02/17/86  
DATE INJECTED 03/05/86

ANALYST  
INSTRUMENT

WJL  
5100

VERIFIED BY LAK  
COMPOUNDS DETECTED 1

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1B	1B	acenaphthene	ND	41B	61B	N-nitrosodimethylamine	ND
4B	5B	benzidine	ND	43B	62B	N-nitrosodiphenylamine	ND
46B	8B	1,2,4-trichlorobenzene	ND	42B	63B	N-nitrosodi-n-propylamine	ND
33B	9B	hexachlorobenzene	ND	13B	66B	bis(2-ethylhexyl)phthalate	ND
36B	12B	hexachloroethane	ND	15B	67B	butyl benzyl phthalate	ND
11B	18B	bis(2-chloroethyl)ether	ND	26B	204	di-butyl phthalate	1 BL
16B	20B	2-chloronaphthalene	ND	29B	69B	di-n-octyl phthalate	ND
20B	25B	1,2-dichlorobenzene	ND	24B	70B	diethyl phthalate	ND
21B	26B	1,3-dichlorobenzene	ND	25B	71B	dimethyl phthalate	ND
22B	27B	1,4-dichlorobenzene	ND	5B	72B	benzo(a)anthracene A	ND
23B	28B	3,3'-dichlorobenzidine	ND	6B	73B	benzo(a)pyrene	ND
27B	35B	2,4-dinitrotoluene	ND	7E	74B	benzo(b)fluoranthene *	ND
28B	36B	2,6-dinitrotoluene	ND	9B	75B	benzo(k)fluoranthene *	ND
29B	37B	1,2-diphenylhydrazine	ND	18B	76B	chrysene A	ND
31B	39B	fluoranthene	ND	2B	77B	acenaphthylene	ND
17B	40B	4-chlorophenyl phenyl ether	ND	3B	78B	anthracene B	ND

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REPORT

Results by Sample

LAB # 86-02-091

Continued From Above

SAMPLE ID 860163

FRACTION 02A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/13/86

Category

14B	41B	4-bromophenyl phenyl ether	ND	8B	79B	benzo(ghi)perylene	ND
12B	42B	bis(2-chloroisopropyl)ether	ND	32B	80B	fluorene	ND
10B	43B	bis(2-chloroethoxy)methane	ND	44B	81B	phenanthrene B	ND
34B	52B	hexachlorobutadiene	ND	19B	82B	dibenzo(a,h)anthracene	ND
35B	53B	hexachlorocyclopentadiene	ND	37B	83B	indeno(1,2,3-cd)pyrene	ND
38B	54B	isophorone	ND	45B	84B	pyrene	ND
39B	55B	naphthalene	ND				
40B	56B	nitrobenzene	ND				

SURROGATE RECOVERIES

SCAN CODE	RESULT
3	
513 BS1	d5-nitrobenzene 100
776 BS2	2-fluorobiphenyl 88
1353 BS3	d14-terphenyl 51
BS4	d10-biphenyl

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.  
 All results reported in ug/l unless otherwise specified.  
 ND = not detected at EPA detection limit method 625, (Federal Register, 10/26/84).  
 \* = benzo(b)fluoranthene and benzo(k)fluoranthene co-elute.  
 A = benzo(a)anthracene and chrysene co-elute in high concentrations.

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Results by Sample

REPORT

LAB # 86-02-091

Continued From Above

SAMPLE ID 860163

FRACTION 02A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/13/86

Category

B = anthracene and phenanthrene co-elute in high concentrations.

BL = detected in reagent blank; background subtraction not performed.

J = estimated value; less than method detection limit.

CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Analytical Serv

REPORT

LAB # 86-02-091

Results by Sample

SAMPLE ID 860163

FRACTION 02A TEST CODE NSNS S NAME GCMS Characterization-ABN  
Date & Time Collected 02/13/86 Category

CHRD # 5U02091C02  
SAMPLE SIZE 1

DATE ANALYZED 03/05/86

UNITS ug/l

VERIFIED BY LAK

SCAN

COMPOUND

RESULT

CONF REF  
LEVEL CMPD

No PCB's detected

**CORPORATION**

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-091

SAMPLE ID 860163

FRACTION 02A

TEST CODE MS 608

NAME Pesticides & PCBs by GC/MS

Date & Time Collected 02/13/86

Category

DATA FILE 50002091C02

DATE EXTRACTED 02/17/86

ANALYST WJL

VERIFIED BY LAK

CONC. FACTOR

DATE INJECTED 03/05/86

COMPOUNDS DETECTED 0

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1P	89P	aldrin	ND	2P	102P	alpha BHC	ND
10P	90P	dieldrin	ND	3P	103P	beta BHC	ND
6P	91P	chlordane	ND	4P	104P	gamma BHC	ND
7P	92P	4,4'-DDT	ND	5P	105P	delta BHC	ND
8P	93P	4,4'-DDE	ND	18P	106P	PCB-1242	ND
9P	94P	4,4'-DDD	ND	19P	107P	PCB-1254	ND
11P	95P	alpha endosulfan	ND	20P	108P	PCB-1221	ND
12P	96P	beta endosulfan	ND	21P	109P	PCB-1232	ND
14P	97P	endosulfan sulfate	ND	22P	110P	PCB-1248	ND
14P	98P	endrin	ND	23P	111P	PCB-1260	ND
15P	99P	endrin aldehyde	ND	24P	112P	PCB-1016	ND
16P	100P	heptachlor	ND	25P	113P	toxaphene	ND
17P	101P	heptachlor epoxide	ND				

**CORPORATION**

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REPORT

Results by Sample

LAB # 86-02-091

Continued From Above

SAMPLE ID 860163

FRACTION 02A

TEST CODE MS 608

NAME Pesticides & PCBs by GC/MS

Date & Time Collected 02/13/86

Category

**NOTES AND DEFINITIONS FOR THIS REPORT:**

SCAN = scan number on chromatogram.

All results reported in micrograms/liter unless otherwise specified.

ND = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-091

SAMPLE ID reagent blank BNA

FRACTION Q3A

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected not specified

Category

DATA FILE 5CE02091C03  
CONC. FACTOR 1

DATE EXTRACTED 02/17/86  
DATE INJECTED 03/05/86

ANALYST  
INSTRUMENT

WJL  
5100

VERIFIED BY LAK  
COMPOUNDS DETECTED 0

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
11A	21A	2,4,6-trichlorophenol	ND	7A	58A	4-nitrophenol	ND
8A	22A	4-chloro-3-methylphenol	ND	5A	59A	2,4-dinitrophenol	ND
31A	24A	2-chlorophenol	ND	4A	60A	2-methyl-4,6-dinitrophenol	ND
2A	31A	2,4-dichlorophenol	ND	9A	64A	pentachlorophenol	ND
3A	34A	2,4-dimethylphenol	ND	10A	65A	phenol	ND
6A	57A	2-nitrophenol	ND				

SURROGATE RECOVERIES

SCAN CODE	COMPOUND	RESULT
400 AS1	d5-phenol	71
277 AS2	2-fluorophenol	70
978 AS3	2,4,6-tribromophenol	100
AS4	d3-phenol	

NOTES AND DEFINITIONS FOR THIS REPORT

SCAN = scan number or retention time on chromatogram  
All results reported in ug/l unless otherwise specified.

**WATKINS CORPORATION**

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-091

Continued From Above

SAMPLE ID reagent blank BNA

FRACTION 03A

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected not specified

Category

ND = not detected at EPA detection limit method 625, (Federal Register, 11/26/84).

BL = detected in reagent blank; background subtraction not performed.

J = estimated value; less than method detection limit.

CENC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.



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Results by Sample

REPORT

LAB # 86-02-091

SAMPLE ID reagent blank BNA

FRACTION 03A

TEST CODE M625 B NAME Method 625 Base/Neutrals

Date & Time Collected not specified

Category

DATA FILE 5C802091C03  
CONC. FACTOR 1

DATE EXTRACTED 02/17/86  
DATE INJECTED 03/05/86

ANALYST  
INSTRUMENT

WJL  
5100

VERIFIED BY LAK  
COMPOUNDS DETECTED 2

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
18	18	acenaphthene	ND	41B	61B	N-nitrosodimethylamine	ND
4B	5B	benzidine	ND	43B	62B	N-nitrosodiphenylamine	ND
46B	8B	1,2,4-trichlorobenzene	ND	42B	63B	N-nitrosodi-n-propylamine	ND
33B	9B	hexachlorobenzene	ND	13B 1531	66B	bis(2-ethylhexyl)phthalate	1
36B	12B	hexachloroethane	ND	15B	67B	butyl benzyl phthalate	ND
11B	18B	bis(2-chloroethyl)ether	ND	26B 1204	68B	di-butyl phthalate	1
16B	20B	2-chloronaphthalene	ND	29B	69B	di-n-octyl phthalate	ND
20B	25B	1,2-dichlorobenzene	ND	24B	70B	diethyl phthalate	ND
21B	26B	1,3-dichlorobenzene	ND	25B	71B	dimethyl phthalate	ND
22B	27B	1,4-dichlorobenzene	ND	5B	72B	benzo(a)anthracene A	ND
23B	28B	3,3'-dichlorobenzidine	ND	6B	73B	benzo(a)pyrene	ND
27B	35B	2,4-dinitrotoluene	ND	7B	74B	benzo(b)fluoranthene *	ND
28B	36B	2,6-dinitrotoluene	ND	9B	75B	benzo(k)fluoranthene *	ND
29B	37B	1,2-diphenylhydrazine	ND	18B	76B	chrysene A	ND
31B	39B	fluoranthene	ND	2B	77B	acenaphthylene	ND
17B	40B	4-chlorophenyl phenyl ether	ND	3B	78B	anthracene B	ND

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-091

Continued From Above

SAMPLE ID reagent blank BNA

FRACTION 03A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected not specified

Category

14B	41B	4-bromophenyl phenyl ether	ND	8B	79B	benzo(ghi)perylene	ND
12B	42B	bis(2-chloroisopropyl)ether	ND	32B	80B	fluorene	ND
10B	43B	bis(2-chloroethoxy)methane	ND	44B	81B	phenanthrene B	ND
34B	52B	hexachlorobutadiene	ND	19B	82B	dibenzo(a,h)anthracene	ND
35B	53B	hexachlorocyclopentadiene	ND	37B	83B	indeno(1,2,3-cd)pyrene	ND
38B	54B	isophorone	ND	45B	84B	pyrene	ND
39B	55B	naphthalene	ND				
40B	56B	nitrobenzene	ND				

SURROGATE RECOVERIES

SCAN CODE	RESULT
514 BS1	d5-nitrobenzene 98
776 BS2	2-fluorobiphenyl 80
1353 BS3	d14-terphenyl 54
BS4	d10-biphenyl

3 194

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.  
 All results reported in ug/l unless otherwise specified.  
 ND = not detected at EPA detection limit method 625, (Federal Register, 10/26/84).  
 + = benzo(b)fluoranthene and benzo(k)fluoranthene co-elute.  
 A = benzo(a)anthracene and chrysene co-elute in high concentrations.

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REPORT

Results by Sample

LAB # 86-02-091

Continued From Above

SAMPLE ID reagent blank BNA

FRACTION 03A

TEST CODE M625 B NAME Method 625 Base/Neutrals

Date & Time Collected not specified

Category

3 = anthracene and phenanthrene co-elute in high concentrations.  
 RL = detected in reagent blank, background subtraction not performed.  
 U = estimated value, less than method detection limit.  
 CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection  
 limits should be multiplied by conc. factor.

INFORMATION  
CORPORATION

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Analytical Serv

LAB # 86-02-091

REPORT

Results by Sample

SAMPLE ID reagent blank BNA

FRACTION 03A

TEST CODE MSNS S NAME GCMS Characterization-ABN

Date & Time Collected not specified

Category

CHRD # 5802091C03

VERIFIED BY LAK

SAMPLE SIZE 1

DATE ANALYZED 03/05/86

UNITS ug/l

SCAN

COMPOUND

RESULT

CONF LEVEL  
REF CMPD

No PCB's detected

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-091

SAMPLE ID reagent blank BNA

FRACTION 03A

TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS

Date & Time Collected not specified

Category

DATA FILE SCU02091C03

DATE EXTRACTED 02/17/86

ANALYST WJL

VERIFIED BY LAK

CONC FACTOR

DATE INJECTED 03/05/86

COMPOUNDS DETECTED 0

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1P	89P	aldrin	ND	2P	102P	alpha BHC	ND
10P	90P	dieldrin	ND	3P	103P	beta BHC	ND
6P	91P	chlordane	ND	4P	104P	gamma BHC	ND
7P	92P	4,4'-DDT	ND	5P	105P	delta BHC	ND
8P	93P	4,4'-DDE	ND	18P	106P	PCB-1242	ND
9P	94P	4,4'-DDD	ND	19P	107P	PCB-1254	ND
11P	95P	alpha endosulfan	ND	20P	108P	PCB-1221	ND
12P	96P	beta endosulfan	ND	21P	109P	PCB-1232	ND
14P	97P	endosulfan sulfate	ND	22P	110P	PCB-1248	ND
14P	98P	endrin	ND	23P	111P	PCB-1260	ND
15P	97P	endrin aldehyde	ND	24P	112P	PCB-1016	ND
16P	100P	heptachlor	ND	25P	113P	toxaphene	ND
17P	101P	heptachlor epoxide	ND				

**INSTRUMENTAL  
CORPORATION**

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-091

Continued From Above

SAMPLE ID reagent blank BNA

FRACTION 03A

TEST CODE MS 608

NAME Pesticides & PCBs by GC/MS

Date & Time Collected not specified

Category

**NOTES AND DEFINITIONS FOR THIS REPORT**

SCAN = scan number on chromatogram

All results reported in micrograms/liter unless otherwise specified.

ND = not detected at EPA detection limit method 625, (Federal Register, 12/3/79)

INFORMATION  
CORPORATION

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Analytical Serv

REPORT

NonReported Work

LAB # 86-02-091

FRACTION AND TEST CODES FOR WORK NOT REPORTED ELSEWHERE

028 : DUP\_NS

# WATKINS CORPORATION

PAGE 1  
 RECEIVED: 02/17/86  
 Analytical Serv  
 REPORT  
 04/02/86 16:56:44  
 LAB # 86-02-100

REPORT Radian  
 TO RI 4  
 Austin  
 ATTEN Larry French  
 CLIENT PLANT4  
 COMPANY Plant 4  
 FACILITY Carswell AFB (Gen. Dynamics)

PREPARED Radian Analytical Services  
 BY B501 MoPac Blvd.  
 P.O. Box 9948  
 Austin, Texas 78766  
 ATTEN  
 PHONE (512) 454-4797

*Carl Smith*  
 CERTIFIED BY  
 CONTACT CONOVER

WORK ID groundwater  
 TAKEN WJ  
 TRANS PAW  
 TYPE  
 P.O. # 212-027-27-40  
 INVOICE under separate cover

Unknown compound eluting here  
 Second column confirmation performed for EPA 601 -04, -05

## Footnotes and Comments

- \* Indicates a value less than 5 times the detection limit. Potential error for such low values ranges between 50 and 100%.
- @ Indicates that spike recovery for this analysis on the specific matrix was not within acceptable limits indicating an interferent present.

## SAMPLE IDENTIFICATION

01 860135  
 02 860164  
 03 860165  
 04 860166  
 05 860167  
 06 860168  
 07 trip blank

## Analytical Serv TEST CODES and NAMES used on this report

AG E Silver, ICPEs  
 AS GA Arsenic, low level  
 BA E Barium, ICPEs  
 CD E Cadmium, ICPEs  
 CR E Chromium, ICPEs  
 DG3020 Digestion by Method 3020  
 DG5010 Digestion by Method 5010  
 GC 501 EPA Method 601/GC  
 GC 502 EPA Method 602/GC  
 HC IR Hydrocarbons  
 HQ CA Mercury, Cold Vapor  
 ONG IR Oil and Grease, Infrared  
 PB GA Lead, low level  
 SE GA Selenium, low level  
 XYLENE Xylenes



RECEIVED: 02/17/86

RESULTS BY TEST

TEST CODE	Sample 01 (entered units)	Sample 02 (entered units)	Sample 03 (entered units)	Sample 04 (entered units)	Sample 05 (entered units)
AG E ug/ml	0.003*	0.007*	0.007*	<.002	
AS GA ug/ml	<.002	0.007*	0.007*	<.002	
BA E ug/ml	0.068	0.017	0.017	0.031	
CD E ug/ml	<.002	<.002	<.002	<.002	
CR E ug/ml	<.005	0.008*	0.008*	<.005	<.005
DG3020 date complete	02/20/86	02/20/86	02/20/86	02/20/86	02/20/86
DG6010 date complete	02/20/86	02/20/86	02/20/86	02/20/86	02/20/86
HC IR mg/L	<1			<1	
HG CA ug/ml	<.0002	<.0002	<.0002	<.0002	
ONG IR mg/L	<1			3.9	
PB GA ug/ml	0.009	0.010	0.010	0.00482	
SE GA ug/ml	<.003	<.003	<.003	<.003	

**CORPORATION**

LAB # 86-02-100

Analytical Serv REPORT

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RESULTS BY TEST

TEST CODE default units	Sample 06 (entered units)
ONG IR mg/L	<1

# CORPORATION

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Analytical Serv  
Results by Sample

LAB # 86-02-100

SAMPLE ID 860164

FRACTION 02B  
Date & Time Collected 02/14/86

TEST CODE GC 601 NAME EPA Method 601/GC  
Category

DATA FILE	G	DATE INJECTED	02/17/86	ANALYST	RP	VERIFIED BY	MCL
CONC	FACTOR			INSTRUMENT	g	COMPOUNDS DETECTED	2
SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT		
	Chloromethane	ND		Trichloroethane	ND		
	Bromomethane	ND		Dibromochloromethane	*	ND	
	Vinyl Chloride	ND		1,1,2-Trichloroethane	*	ND	
	Chloroethane	ND		cis-1,3-Dichloropropene	*	ND	
1	Methylene Chloride	0.50		2-Chloroethylvinyl Ether	ND		
	Trichlorofluoromethane	ND		Bromoform	ND		
	1,1-Dichloroethene	ND		1,1,2,2-Tetrachloroethane	#	ND	
	1,1-Dichloroethane	ND	3	Tetrachloroethylene	#	0.02	
	trans-1,2-Dichloroethene	ND		Chlorobenzene	ND		
2	Chloroform	1.14		1,3-Dichlorobenzene	ND		
	1,2-Dichloroethane	ND		1,2-Dichlorobenzene	ND		
	1,1,1-Trichloroethane	ND		1,4-Dichlorobenzene	ND		
	Carbon Tetrachloride	ND					
	Bromodichloromethane	ND					
	1,2-Dichloropropane	ND					
	trans-1,3-Dichloropropene	ND					

CORPORATION

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RECEIVED: 02/17/86  
Analytical Serv  
Results by Sample

LAB # 85-02-100  
Continued From Above

SAMPLE ID 860164  
FRACTION 02B  
TEST CODE GC 601  
NAME EPA Method 601/GC  
Date & time Collected 02/14/86  
Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.  
All results reported in \_\_\_ug/L unless otherwise specified.  
ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79).  
\*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.  
#1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

# CORPORATION

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Analytical Serv  
Results by Sample

LAB # 85-02-100

SAMPLE ID 860164

FRACTION 02D

TEST CODE GC 602 NAME EPA Method 602/GC

Date & Time Collected 02/14/86

Category

DATA FILE  
CONC FACTOR

D

DATE INJECTED 02/17/86

ANALYST  
INSTRUMENT

RP

VERIFIED BY MCL  
COMPOUNDS DETECTED 1

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
	Benzene	ND		1,4-Dichlorobenzene	ND
1	Toluene	5.10		1,3-Dichlorobenzene	ND
	Ethyl Benzene	ND		1,2-Dichlorobenzene	ND
	Chlorobenzene	ND			

3 205

## NOTES AND DEFINITIONS FOR THIS REPORT

SCAN = scan number or retention time on chromatogram.  
All results reported in µg/L unless otherwise specified.  
ND = not detected at EPA detection limit method 602. (Federal Register, 10/3/79)

# MINI-NATION CORPORATION

PAGE /  
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Analytical Serv

REPORT

LAB # 85-02-100

Results by Sample

SAMPLE ID 860165

FRACTION 03B

TEST CODE QC 601

NAME EPA Method 601/9C

Date & Time Collected 02/14/86

Category

DATA FILE \_\_\_\_\_  
CONC. FACTOR \_\_\_\_\_

DATE INJECTED 02/17/86

ANALYST \_\_\_\_\_  
INSTRUMENT \_\_\_\_\_

VERIFIED BY MCL \_\_\_\_\_  
COMPOUNDS DETECTED \_\_\_\_\_

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
---	Chloromethane	ND	---	Trichloroethene	0.22
---	Bromomethane	ND	---	Dibromochloromethane *	ND
---	Vinyl Chloride	ND	---	1,1,2-Trichloroethane *	ND
---	Chloroethane	ND	---	cis-1,3-Dichloropropene *	ND
---	Methylene Chloride	0.92	---	2-Chloroethylvinyl Ether	ND
---	Trichlorofluoromethane	ND	---	Bromoform	ND
---	1,1-Dichloroethene	ND	---	1,1,2,2-Tetrachloroethane #	ND
---	1,1-Dichloroethane	ND	---	Tetrachloroethylene #	ND
---	trans-1,2-Dichloroethene	ND	---	Chlorobenzene	ND
---	Chloroform	ND	---	1,3-Dichlorobenzene	ND
---	1,2-Dichloroethane	ND	---	1,2-Dichlorobenzene	ND
---	1,1,1-Trichloroethane	ND	---	1,4-Dichlorobenzene	ND
---	Carbon Tetrachloride	ND			
---	Bromodichloromethane	ND			
---	1,2-Dichloropropane	ND			
---	trans-1,3-Dichloropropene	ND			

# WATKINS CORPORATION

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-100

Continued From Above

SAMPLE ID 860165

FRACTION 03B

TEST CODE GC 601

NAME EPA Method 601/GC

Date & Time Collected 02/14/86

Category

## NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

All results reported in \_\_\_ ug/L, unless otherwise specified.

ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79).

\*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.

#1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

LAB # 85-02-100

Analytical Serv REPORT

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RECEIVED: 02/17/86 Results by Sample

SAMPLE ID 860165 FRACTION Q3D TEST CODE GC 602 NAME EPA Method 602/GC

Date & Time Collected 02/14/86 Category

DATA FILE \_\_\_\_\_ D \_\_\_\_\_ DATE INJECTED 02/17/86 ANALYST \_\_\_\_\_ RP \_\_\_\_\_ VERIFIED BY MCL  
CONC. FACTOR \_\_\_\_\_ INSTRUMENT \_\_\_\_\_ d \_\_\_\_\_ COMPOUNDS DETECTED 1

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
	Benzene	ND		1,4-Dichlorobenzene	ND
3	Toluene	1.19		1,3-Dichlorobenzene	ND
	Ethyl Benzene	ND		1,2-Dichlorobenzene	ND
	Chlorobenzene	ND			

3 208

NOTES AND DEFINITIONS FOR THIS REPORT.  
SCAN = scan number or retention time on chromatogram.  
All results reported in \_\_\_\_\_ ug/L unless otherwise specified.  
ND = not detected at EPA detection limit method 602, (Federal Register, 12/3/79)



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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-100

SAMPLE ID 860166

FRACTION 04D

TEST CODE CC 601

NAME EPA Method 601/CC

Date & Time Collected 02/14/86

Category

DATA FILE	G	DATE INJECTED	02/17/86	ANALYST	RP	VERIFIED BY	NDL
CONC. FACTOR				INSTRUMENT	9	COMPOUNDS DETECTED	
SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT		
	Chloromethane	ND	2	Trichloroethane	232.7		
	Bromomethane	ND		Dibromochloromethane	*	ND	
	Vinyl Chloride	ND		1,1,2-Trichloroethane	*	ND	
	Chloroethane	ND		cis-1,3-Dichloropropene	*	ND	
	Methylene Chloride	ND		2-Chloroethylvinyl Ether	ND		
3	Trichlorofluoromethane	ND		Bromoform	140		
209	1,1-Dichloroethene	ND		1,1,2,2-Tetrachloroethane	#	ND	
	1,1-Dichloroethane	ND		Tetrachloroethylene	#	ND	
1	trans-1,2-Dichloroethene	2045		Chlorobenzene	ND		
	Chloroform	ND		1,3-Dichlorobenzene	ND		
	1,2-Dichloroethane	ND		1,2-Dichlorobenzene	ND		
	1,1,1-Trichloroethane	ND		1,4-Dichlorobenzene	ND		
	Carbon Tetrachloride	ND					
	Bromodichloromethane	ND					
	1,2-Dichloropropane	ND					
	trans-1,3-Dichloropropene	ND					

**ANALYTICAL CORPORATION**

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-100

Continued From Above

SAMPLE ID 860166

FRACTION 04D

TEST CODE GC 601 NAME EPA Method 601/GC

Date & Time Collected 02/14/86

Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

All results reported in ug/L unless otherwise specified

ND = not detected at EPA detection limit method 601, (Federal Register, 12/2/79)

\*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,2-dichloropropene co-elute.

#1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

# CORPORATION

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 Analytical Serv  
 Results by Sample

LAB # 85-02-100

SAMPLE ID 860166  
 FRACTION 04F  
 TEST CODE GC 602  
 NAME EPA Method 602/GC  
 Date & Time Collected 02/14/86  
 Category

DATA FILE \_\_\_\_\_ D \_\_\_\_\_ DATE INJECTED 02/17/86  
 ANALYST \_\_\_\_\_ RP \_\_\_\_\_ VERIFIED BY MCL  
 CONC. FACTOR \_\_\_\_\_ INSTRUMENT \_\_\_\_\_ d \_\_\_\_\_ COMPOUNDS DETECTED \_\_\_\_\_

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
	Benzene	ND		1,4-Dichlorobenzene	ND
	Toluene	ND		1,3-Dichlorobenzene	ND
	Ethyl Benzene	ND		1,2-Dichlorobenzene	ND
	Chlorobenzene	ND			

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## NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.  
 All results reported in \_\_\_\_\_ ug/L unless otherwise specified.  
 ND = not detected at EPA detection limit method 602, (Federal Register, 1573779)

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Analytical Serv

REPORT

Results by Sample

LAB # 85-02-100

SAMPLE ID 860167

FRACTION 05B

TEST CODE CC 601

NAME EPA Method 601/CC

Date & Time Collected 02/14/86

Category

DATA FILE \_\_\_\_\_ G DATE INJECTED 02/17/86

CONC. FACTOR \_\_\_\_\_

ANALYST \_\_\_\_\_

RE \_\_\_\_\_

VERIFIED BY MCL

COMPOUNDS DETECTED 2

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
---	Chloromethane	ND	2	Trichloroethene	12.2
---	Bromomethane	ND	---	Dibromochloromethane	4
---	Vinyl Chloride	ND	---	1,1,2-Trichloroethane	4
---	Chloroethane	ND	---	cis-1,3-Dichloropropene	4
---	Methylene Chloride	ND	---	2-Chloroethylvinyl Ether	ND
---	Trichlorofluoromethane	ND	---	Bromoform	ND
---	1,1-Dichloroethene	ND	---	1,1,2,2-Tetrachloroethane	4
---	1,1-Dichloroethane	ND	---	tetrachloroethylene	4
---	trans-1,2-Dichloroethene	ND	---	Chlorobenzene	ND
1	Chloroform	3.02	---	1,3-Dichlorobenzene	ND
---	1,2-Dichloroethane	ND	---	1,2-Dichlorobenzene	ND
---	1,1,1-Trichloroethane	ND	---	1,4-Dichlorobenzene	ND
---	Carbon tetrachloride	ND			
---	Bromodichloromethane	ND			
---	1,2-Dichloropropane	ND			
---	trans-1,3-Dichloropropene	ND			

CORPORATION

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-100

Continued From Above

SAMPLE ID 860167

FRACTION 05B

TEST CODE GC 601

NAME EPA Method 601/GC

Date & Time Collected 02/14/86

Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

All results reported in ug/L unless otherwise specified.

ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79).

\*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.

#1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

# CORPORATION

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Analytical Serv

REPORT

LAB # 82-02-100

RECEIVED: 02/17/86

Results by Sample

SAMPLE ID 860167

FRACTION 05D

TEST CODE GC 602

NAME EPA Method 602/OC

Date & Time Collected 02/14/86

Category

DATA FILE: D DATE INJECTED 02/17/86 ANALYST: RP VERIFIED BY MCL  
 CONC. FACTOR: INSTRUMENT: g COMPOUNDS DETECTED: 1

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
	Benzene	ND		1,4-Dichlorobenzene	ND
3	Toluene	0.83		1,3-Dichlorobenzene	ND
214	Ethyl Benzene	ND		1,2-Dichlorobenzene	ND
	Chlorobenzene	ND			

## NOTES AND DEFINITIONS FOR THIS REPORT

SCAN = scan number or retention time on chromatogram.

All results reported in ug/l unless otherwise specified

ND = not detected at EPA detection limit method 602, (Federal Register, 12/3/79)

**CORPORATION**

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Analytical Serv

REPORT

LAB # 86-02-100

Results by Sample

SAMPLE ID 860168

FRACTION 06B

TEST CODE XYLENE

NAME Xylenes

Date & Time Collected 02/14/86

Category

DATA FILE: \_\_\_\_\_ D \_\_\_\_\_ DATE INJECTED 02/17/86 ANALYST \_\_\_\_\_ RP \_\_\_\_\_ VERIFIED BY MCL  
CONC. FACTOR \_\_\_\_\_ INSTRUMENT \_\_\_\_\_ 1 \_\_\_\_\_ COMPOUNDS DETECTED 0

SCAN	COMPOUND	RESULT
_____	p-xylene	ND
_____	m-xylene	ND
_____	o-xylene	ND

3 215

NOTES AND DEFINITIONS FOR THIS REPORT:

SCAN = scan number or retention time on chromatogram  
All results reported in \_\_\_\_\_ ug/l unless otherwise specified  
ND = not detected.

Analytical Serv

REPORT

LAB # 85-02-100

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RECEIVED: 02/17/86

Results by Sample

SAMPLE ID trip blank

FRACTION 07A

TEST CODE GC 601 NAME EPA Method 601/GC

Date & time Collected not specified

Category

DATA FILE	G	DATE INJECTED	02/17/86	ANALYST	RP	VERIFIED BY MCL
CONC. FACTOR				INSTRUMENT	2	COMPOUNDS DETECTED
SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT	
	Chloromethane	ND		Trichloroethane	ND	
	Bromomethane	ND		Dibromochloromethane	*	ND
	Vinyl Chloride	ND		1,1,2-Trichloroethane	*	ND
	Chloroethane	ND		cis-1,3-Dichloropropene	*	ND
1	Methylene Chloride	0.47		2-Chloroethylvinyl Ether	ND	
2	Trichlorofluoromethane	2.34		Bromoform	ND	
	1,1-Dichloroethene	ND		1,1,2,2-tetrachloroethane	#	ND
	1,1-Dichloroethane	ND		Tetrachloroethylene	#	ND
	trans-1,2-Dichloroethene	ND		Chlorobenzene	ND	
	Chloroform	ND		1,3-Dichlorobenzene	ND	
	1,2-Dichloroethane	ND		1,2-Dichlorobenzene	ND	
	1,1,1-trichloroethane	ND		1,4-Dichlorobenzene	ND	
	Carbon Tetrachloride	ND				
	Bromodichloromethane	ND				
	1,2-Dichloropropane	ND				
	trans-1,3-Dichloropropene	ND				



**CORPORATION**

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Analytical Serv

REPORT

Results by Sample

LAB # 85-02-100

Continued From Above

SAMPLE ID trip blank

FRACTION O/A TEST CODE GC 601 NAME EPA Method 601/GC

Date & Time Collected not specified

Category

**NOTES AND DEFINITIONS FOR THIS REPORT**

SCAN = scan number or retention time on chromatogram  
 All results reported in ug/l unless otherwise specified  
 ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79)  
 \*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.  
 #1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

**CORPORATION**

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 Analytical Serv  
 Results by Sample

REPORT

LAB # 82-02-100

SAMPLE ID trip blank

FRACTION 07A

TEST CODE GC 602 NAME EPA Method 602 GC

Date & time Collected not specified

Category

DATA FILE \_\_\_\_\_ D \_\_\_\_\_ DATE INJECTED 02/17/86 ANALYST \_\_\_\_\_ RE \_\_\_\_\_ VERIFIED BY MCG  
 CONC FACTOR \_\_\_\_\_ INSTRUMENT \_\_\_\_\_ 1 COMPOUNDS DETECTED \_\_\_\_\_

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
---	Benzene	ND :	---	1,4-Dichlorobenzene	ND
---	Toluene	ND :	---	1,3-Dichlorobenzene	ND
---	Ethyl Benzene	ND :	---	1,2-Dichlorobenzene	ND
---	Chlorobenzene	ND :	---		

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**NOTES AND DEFINITIONS FOR THIS REPORT**

SCAN = scan number or retention time on chromatogram  
 All results reported in \_\_\_\_\_ ug/L unless otherwise specified.  
 ND = not detected at EPA detection limit method 602, (Federal Register, 10/27/79)

**CORPORATION**

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Analytical Serv

REPURI

NonReported Work

LAB # 85-02-100

FRACTION AND TEST CODES FOR WORK NOT REPORTED ELSEWHERE

02C	:	DUP601	02F	:	DUP602
03C	:	DUP601	03E	:	DUP602
04E	:	DUP601	04G	:	DUP602
05C	:	DUP601	05E	:	DUP602
06C	:	DUP_NS			

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Analytical Serv

REPORT

03/11/86 17:01:41

LAB # 86-02-109

REPORT Radian Corporation  
TO Larry French  
Austin, Texas

PREPARED Radian Analytical Services  
BY 8501 MoPac Blvd

P.O. Box 9948

Austin, Texas 78766

ATTEN:

ATTEN

PHONE (512) 454-4797

CONTACT FRENCH

CLIENT PLANT 4  
COMPANY General Dynamics  
FACILITY GEHL Plant 4, Bldg 4  
Austin, Texas

SAMPLES 4

WORK ID General Dynamics-Ft. Worth  
TAKEN 2/14/86

TRANS Federal 736740812  
TYPE H2O

P.O. # 212-027-27-40

INVOICE under separate cover

Footnotes and Comments

\* Indicates a value less than 5 times the detection limit.  
Potential error for such low values ranges between  
50 and 100%.

@ Indicates that spike recovery for this analysis on the  
specific matrix was not within acceptable limits indicating  
an interferent present.

SAMPLE IDENTIFICATION

01 860164  
02 860165  
03 860166  
04 Reagent blank 625

Analytical Serv TEST CODES and NAMES used on this report

EX 625 Extraction only - 625 BN/A  
M625 A Method 625 Acid Compounds  
M625 B Method 625 Base/Neutrals  
MS 608 Pesticides & PCBs by GC/MS

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Analytical Serv

REPORT

LAB # 86-02-109

RESULTS BY TEST

TEST CODE	Sample 01	Sample 02	Sample 03	Sample 04
default units	(entered units)	(entered units)	(entered units)	(entered units)
EX 625	02/18/86	02/18/86	02/18/86	02/18/86
date complete				

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-109

SAMPLE ID 860164

FRACTION 01A

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected 02/14/86

Category

DATA FILE 5002109C01  
CONC. FACTOR 1

DATE EXTRACTED 02/18/86  
DATE INJECTED 03/05/86

ANALYST  
INSTRUMENT

MM  
5100

VERIFIED BY LAK  
COMPOUNDS DETECTED 1

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
11A	21A	2,4,6-trichlorophenol	ND	7A	58A	4-nitrophenol	ND
8A	22A	4-chloro-3-methylphenol	ND	5A	59A	2,4-dinitrophenol	ND
1A	24A	2-chlorophenol	ND	4A	60A	2-methyl-4,6-dinitrophenol	ND
2A	31A	2,4-dichlorophenol	ND	9A	64A	pentachlorophenol	ND
3A	34A	2,4-dimethylphenol	ND	10A	399	phenol	2
6A	57A	2-nitrophenol	ND				

3 222

**SURROGATE RECOVERIES**

SCAN CODE	COMPOUND	RESULT
378 AS1	d5-phenol	66
274 AS2	2-fluorophenol	64
977 AS3	2,4,6-tribromophenol	91
AS4	d3-phenol	

**NOTES AND DEFINITIONS FOR THIS REPORT.**

SCAN = scan number or retention time on chromatogram.  
All results reported in ug/l unless otherwise specified.

**WATKINS CORPORATION**

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-109

Continued From Above

SAMPLE ID 860164

FRACTION 01A

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected 02/14/86

Category

ND = not detected at EPA detection limit method 625, (Federal Register, 11/26/84).  
BL = detected in reagent blank; background subtraction not performed.  
J = estimated value; less than method detection limit.  
CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-109

SAMPLE ID 860164

FRACTION 01A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/14/86

Category

DATA FILE		DATE EXTRACTED		DATE INJECTED		02/18/86		ANALYST		MM		VERIFIED BY LAK	
CONC	FACTOR	5002107C01		1		03/05/86		INSTRUMENT		5100		COMPOUNDS DETECTED 1	
NPDES SCAN	EPA	COMPOUND		RESULT	NPDES SCAN	EPA	COMPOUND	RESULT					
1B	1B	acenaphthene		ND	41B	61B	N-nitrosodimethylamine	ND					
4B	5B	benzidine		ND	43B	62B	N-nitrosodiphenylamine	ND					
46B	8B	1,2,4-trichlorobenzene		ND	42B	63B	N-nitrosodi-n-propylamine	ND					
33B	9B	hexachlorobenzene		ND	13B	66B	bis(2-ethylhexyl)phthalate	ND					
36B	12B	hexachloroethane		ND	15B	67B	butyl benzyl phthalate	ND					
11B	18B	bis(2-chloroethyl)ether		ND	26B	1204	di-butyl phthalate	1					
16B	20B	2-chloronaphthalene		ND	29B	69B	di-n-octyl phthalate	ND					
20B	25B	1,2-dichlorobenzene		ND	24B	70B	diethyl phthalate	ND					
21B	26B	1,3-dichlorobenzene		ND	25B	71B	dimethyl phthalate	ND					
22B	27B	1,4-dichlorobenzene		ND	5B	72B	benzo(a)anthracene A	ND					
23B	28B	3,3'-dichlorobenzidine		ND	6B	73B	benzo(a)pyrene	ND					
27B	35B	2,4-dinitrotoluene		ND	76	74B	benzo(b)fluoranthene *	ND					
28B	36B	2,6-dinitrotoluene		ND	9B	75B	benzo(k)fluoranthene *	ND					
29B	37B	1,2-diphenylhydrazine		ND	18B	76B	chrysene A	ND					
31B	39B	fluoranthene		ND	2B	77B	acenaphthylene	ND					
17B	40B	4-chlorophenyl phenyl ether		ND	3B	78B	anthracene B	ND					



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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-109

Continued From Above

SAMPLE ID 860164

FRACTION 01A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/14/86

Category

14B	41B	4-bromophenyl phenyl ether	ND	8B	79B	benzo(ghi)perylene	ND
12B	42B	bis(2-chloroisopropyl)ether	ND	32B	80B	fluorene	ND
10B	43B	bis(2-chloroethoxy)methane	ND	44B	81B	phenanthrene B	ND
34B	52B	hexachlorobutadiene	ND	19B	82B	dibenzo(a,h)anthracene	ND
35B	53B	hexachlorocyclopentadiene	ND	37B	83B	indeno(1,2,3-cd)pyrene	ND
38B	54B	isophorone	ND	45B	84B	pyrene	ND
39B	55B	naphthalene	ND				
40B	56B	nitrobenzene	ND				

SURROGATE RECOVERIES

SCAN CODE	RESULT
513 BS1	d5-nitrobenzene 77
716 BS2	2-fluorobiphenyl 74
1352 BS3	d14-terphenyl 92
BS4	d10-biphenyl

3 225

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.  
 All results reported in ug/l unless otherwise specified.  
 ND = not detected at EPA detection limit method 625, (Federal Register, 10/26/84).  
 + = benzo(b)fluoranthene and benzo(k)fluoranthene co-elute.  
 A = benzo(a)anthracene and chrysene co-elute in high concentrations.

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-109

Continued From Above

SAMPLE ID 860164

FRACTION 01A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/14/86

Category

2 = anthracene and phenanthrene co-elute in high concentrations.  
 BL = detected in reagent blank; background subtraction not performed.  
 U = estimated value; less than method detection limit.  
 CONC FACTOR: indicates dilution of sample if greater than one (1). Minimum detection  
 limits should be multiplied by conc. factor.

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Analytical Serv  
Results by Sample

LAB # 86-02-109

SAMPLE ID 860164

FRACTION 01A TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS  
Date & Time Collected 02/14/86 Category

DATA FILE 20002109C01  
CONC. FACTOR

DATE EXTRACTED 02/18/86  
DATE INJECTED 03/05/86

ANALYST MM

VERIFIED BY LAK  
COMPOUNDS DETECTED 0

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1P	89P	aldrin	ND	2P	102P	alpha BHC	ND
10P	90P	dieldrin	ND	3P	103P	beta BHC	ND
6P	91P	chlordane	ND	4P	104P	gamma BHC	ND
7P	92P	4,4'-DDT	ND	5P	105P	delta BHC	ND
8P	93P	4,4'-DDE	ND	18P	106P	PCB-1242	ND
9P	94P	4,4'-DDD	ND	19P	107P	PCB-1254	ND
11P	95P	alpha endosulfan	ND	20P	108P	PCB-1221	ND
12P	96P	beta endosulfan	ND	21P	109P	PCB-1232	ND
14P	97P	endosulfan sulfate	ND	22P	110P	PCB-1248	ND
14P	98P	endrin	ND	23P	111P	PCB-1260	ND
15P	99P	endrin aldehyde	ND	24P	112P	PCB-1016	ND
16P	100P	heptachlor	ND	25P	113P	toxaphene	ND
17P	101P	heptachlor epoxide	ND				

**CORPORATION**

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-109

Continued From Above

SAMPLE ID 860164

FRACTION 01A

TEST CODE MS 608

NAME Pesticides & PCBs by GC/MS

Date & Time Collected 02/14/86

Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number on chromatogram.

All results reported in micrograms/liter unless otherwise specified.

ND = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).

**WATKINSON CORPORATION**

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REPORT

Results by Sample

LAB # 86-02-109

SAMPLE ID 860165

FRACTION 02A

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected 02/14/86

Category

DATA FILE 5CU02109C02  
CONC. FACTOR 1

DATE EXTRACTED 02/18/86  
DATE INJECTED 03/05/86

ANALYST  
INSTRUMENT

MM  
5100

VERIFIED BY LAK  
COMPOUNDS DETECTED 1

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
11A	21A	2,4,6-trichlorophenol	ND	7A	58A	4-nitrophenol	ND
8A	22A	4-chloro-3-methylphenol	ND	5A	59A	2,4-dinitrophenol	ND
1A	24A	2-chlorophenol	ND	4A	60A	2-methyl-4,6-dinitrophenol	ND
2A	31A	2,4-dichlorophenol	ND	9A	64A	pentachlorophenol	ND
3A	34A	2,4-dimethylphenol	ND	10A	399 65A	phenol	1
6A	57A	2-nitrophenol	ND				

**SURROGATE RECOVERIES**

SCAN CODE	COMPOUND	RESULT
398 451	d5-phenol	66
293 452	2-fluorophenol	67
598 453	2,4,6-tribromophenol	104
454	d3-phenol	

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

All results reported in ug/l unless otherwise specified.

**CORPORATION**

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-109

Continued From Above

SAMPLE ID 860165

FRACTION 02A

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected 02/14/86

Category

ND = not detected at EPA detection limit method 625, (Federal Register, 11/26/84).

EL = detected in reagent blank, background subtraction not performed.

J = estimated value, less than method detection limit

CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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REPORT

Results by Sample

LAB # 86-02-109

SAMPLE ID 860165

FRACTION 02A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/14/86

Category

DATA FILE	50002109C02	DATE EXTRACTED	02/18/86	ANALYST	MM	VERIFIED BY	LAK
CONC FACTOR	1	DATE INJECTED	03/05/86	INSTRUMENT	5100	COMPOUNDS DETECTED	1
NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1B	1B	acenaphthene	ND	41B	61B	N-nitrosodimethylamine	ND
4B	5B	benzidine	ND	43B	62B	N-nitrosodiphenylamine	ND
46B	8B	1,2,4-trichlorobenzene	ND	42B	63B	N-nitrosodi-n-propylamine	ND
32B	9B	hexachlorobenzene	ND	13B	66B	bis(2-ethylhexyl)phthalate	ND
36B	12B	hexachloroethane	ND	15B	67B	butyl benzyl phthalate	ND
11B	18B	bis(2-chloroethyl)ether	ND	26B	1204	di-butyl phthalate	2
16B	20B	2-chloronaphthalene	ND	29B	69B	di-n-octyl phthalate	ND
20B	25B	1,2-dichlorobenzene	ND	24B	70B	diethyl phthalate	ND
21B	26B	1,3-dichlorobenzene	ND	25B	71B	dimethyl phthalate	ND
22B	27B	1,4-dichlorobenzene	ND	5B	72B	benzo(a)anthracene A	ND
23B	28B	3,3'-dichlorobenzidine	ND	6B	73B	benzo(a)pyrene	ND
27B	35B	2,4-dinitrotoluene	ND	7B	74B	benzo(b)fluoranthene	ND
28B	36B	2,6-dinitrotoluene	ND	9B	75B	benzo(k)fluoranthene *	ND
29B	37B	1,2-diphenylhydrazine	ND	18B	76B	chrysene A	ND
31B	39B	fluoranthene	ND	2B	77B	acenaphthylene	ND
17B	40B	4-chlorophenyl phenyl ether	ND	3B	78B	anthracene B	ND

# LABORATORY CORPORATION

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REPORT

Results by Sample

LAB # 86-02-109

Continued From Above

SAMPLE ID 860165

FRACTION 02A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/14/86

Category

14B	41B	4-bromophenyl phenyl ether	ND	8B	79B	benzo(ghi)perylene	ND
12B	42B	bis(2-chloroisopropyl)ether	ND	32B	80B	fluorene	ND
10B	43B	bis(2-chloroethoxy)methane	ND	44B	81B	phenanthrene B	ND
34B	52B	hexachlorobutadiene	ND	19B	82B	dibenzo(a,h)anthracene	ND
35B	53B	hexachlorocyclopentadiene	ND	37B	83B	indeno(1,2,3-cd)pyrene	ND
38B	54B	isophorone	ND	45B	84B	pyrene	ND
39B	55B	naphthalene	ND				
40B	56B	nitrobenzene	ND				

## SURROGATE RECOVERIES

SCAN CODE	RESULT
3 513 BS1	d5-nitrobenzene 98
232 776 BS2	2-fluorobiphenyl 90
1352 BS3	d14-terphenyl 72
BS4	d10-biphenyl

## NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.  
 All results reported in ug/l unless otherwise specified.  
 ND = not detected at EPA detection limit method 625, (Federal Register, 10/26/84).  
 \* = benzo(b)fluoranthene and benzo(k)fluoranthene co-elute.  
 A = benzo(a)anthracene and chrysene co-elute in high concentrations.



ANALYTICAL  
CORPORATION

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REPORT

LAB # 86-02-109

Results by Sample

Continued From Above

SAMPLE ID 860165

FRACTION 02A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/14/86

Category

B = anthracene and phenanthrene co-elute in high concentrations.  
BL = detected in reagent blank; background subtraction not performed.  
J = estimated value; less than method detection limit.  
CENC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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REPORT

Results by Sample

LAB # 86-02-109

SAMPLE ID 860165

FRACTION 02A TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS

Date & Time Collected 02/14/86

Category

DATA FILE SC002109C02  
CONC. FACTOR

DATE EXTRACTED 02/18/86  
DATE INJECTED 03/05/86

ANALYST MM

VERIFIED BY LAK  
COMPOUNDS DETECTED 0

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1P	89P	aldrin	ND	2P	102P	alpha BHC	ND
10P	90P	dieldrin	ND	3P	103P	beta BHC	ND
6P	91P	chlordane	ND	4P	104P	gamma BHC	ND
7P	92P	4,4'-DDT	ND	5P	105P	delta BHC	ND
8P	93P	4,4'-DDE	ND	18P	106P	PCB-1242	ND
9P	94P	4,4'-DDD	ND	19P	107P	PCB-1254	ND
11P	95P	alpha endosulfan	ND	20P	108P	PCB-1221	ND
12P	96P	beta endosulfan	ND	21P	109P	PCB-1232	ND
14P	97P	endosulfan sulfate	ND	22P	110P	PCB-1248	ND
14P	98P	endrin	ND	23P	111P	PCB-1260	ND
15P	99P	endrin aldehyde	ND	24P	112P	PCB-1016	ND
16P	100P	heptachlor	ND	25P	113P	toxaphene	ND
17P	101P	heptachlor epoxide	ND				

**MAXAM CORPORATION**

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-109

Continued From Above

SAMPLE ID 860165

FRACTION 02A

TEST CODE MS 608

NAME Pesticides & PCBs by GC/MS

Date & Time Collected 02/14/86

Category

**NOTES AND DEFINITIONS FOR THIS REPORT:**

SCAN = scan number on chromatogram.

All results reported in micrograms/liter unless otherwise specified.

ND = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).

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Analytical Serv

REPORT

LAB # 86-02-109

Results by Sample

SAMPLE ID 850166

FRACTION 03A

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected 02/14/86

Category

DATA FILE 5CU02109C03  
CONC FACTOR 1

DATE EXTRACTED 02/18/86  
DATE INJECTED 03/05/86

ANALYST  
INSTRUMENT

MM  
5100  
VERIFIED BY LAK  
COMPOUNDS DETECTED 1

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
11A	21A	2,4,6-trichlorophenol	ND	7A	58A	4-nitrophenol	ND
8A	22A	4-chloro-3-methylphenol	ND	5A	59A	2,4-dinitrophenol	ND
1A	24A	2-chlorophenol	ND	4A	60A	2-methyl-4,6-dinitrophenol	ND
2A	31A	2,4-dichlorophenol	ND	9A	64A	pentachlorophenol	ND
3A	34A	2,4-dimethylphenol	ND	10A	399 65A	phenol	2
6A	57A	2-nitrophenol	ND				

**SURROGATE RECOVERIES**

SCAN CODE	COMPOUND	RESULT
327 AS1	d5-phenol	50
328 AS2	2-fluorophenol	54
329 AS3	2,4,6-tribromophenol	96
AS4	d3-phenol	

NOTES AND DEFINITIONS FOR THIS REPORT:

SCAN = scan number or retention time on chromatogram.  
All results reported in ug/l unless otherwise specified.

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REPORT

Results by Sample

LAB # 86-02-109

Continued From Above

SAMPLE ID 850166

FRACTION 03A

TEST CODE M625 A

NAME Method 625 Acid Compounds

Date & Time Collected 02/14/86

Category

ND = not detected at EPA detection limit method 625, (Federal Register, 11/26/84).

BL = detected in reagent blank; background subtraction not performed.

J = estimated value; less than method detection limit.

CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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REPORT

Results by Sample

LAB # 86-02-109

SAMPLE ID 860166

FRACTION 03A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/14/86

Category

DATA FILE	SCU02107C03	DATE EXTRACTED	02/18/86	ANALYST	MM	VERIFIED BY	LAK
CORC FACTOR	1	DATE INJECTED	03/05/86	INSTRUMENT	5100	COMPOUNDS DETECTED	1
NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
18	18	acenaphthene	ND	41B	61B	N-nitrosodimethylamine	ND
48	58	benzidine	ND	43B	62B	N-nitrosodiphenylamine	ND
468	88	1,2,4-trichlorobenzene	ND	42B	63B	N-nitrosodi-n-propylamine	ND
338	98	hexachlorobenzene	ND	13B	1533	bis(2-ethylhexyl)phthalate	2
368	128	hexachloroethane	ND	15B	67B	butyl benzyl phthalate	ND
318	188	bis(2-chloroethyl)ether	ND	26B	68B	di-butyl phthalate	ND
168	208	2-chloronaphthalene	ND	29B	69B	di-n-octyl phthalate	ND
208	258	1,2-dichlorobenzene	ND	24B	70B	diethyl phthalate	ND
218	268	1,3-dichlorobenzene	ND	25B	71B	dimethyl phthalate	ND
238	278	1,4-dichlorobenzene	ND	5B	72B	benzo(a)anthracene A	ND
248	288	3,3'-dichlorobenzidine	ND	6B	73B	benzo(a)pyrene	ND
278	356	2,4-dinitrotoluene	ND	7B	74B	benzo(b)fluoranthene *	ND
268	358	2,6-dinitrotoluene	ND	9B	75B	benzo(k)fluoranthene *	ND
298	378	1,2-diphenylhydrazine	ND	10B	76B	chrysene A	ND
318	398	fluoranthene	ND	2B	77B	acenaphthylene	ND
178	408	4-chlorophenyl phenyl ether	ND	3B	78B	anthracene B	ND

# INSTRUMENTAL CORPORATION

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REPORT

Results by Sample

LAB # 86-02-109

Continued From Above

SAMPLE ID 860166

FRACTION 03A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/14/86

Category

14B	41B	4-bromophenyl phenyl ether	ND	8B	79B	benzo(ghi)perylene	ND
12B	42B	bis(2-chloroisopropyl)ether	ND	32B	80B	fluorene	ND
10B	43B	bis(2-chloroethoxy)methane	ND	44B	81B	phenanthrene B	ND
34B	52B	hexachlorobutadiene	ND	19B	82B	dibenzo(a,h)anthracene	ND
35B	53B	hexachlorocyclopentadiene	ND	37B	83B	indeno(1,2,3-cd)pyrene	ND
38B	54B	isophorone	ND	45B	84B	pyrene	ND
39B	55B	naphthalene	ND				
40B	56B	nitrobenzene	ND				

## SURROGATE RECOVERIES

SCAN CODE	RESULT
3	
513 BS1	d5-nitrobenzene 78
776 BS2	2-fluorobiphenyl 75
1353 BS3	d14-terphenyl 66
BS4	d10-biphenyl

## NOTES AND DEFINITIONS FOR THIS REPORT

SCAN = scan number or retention time on chromatogram.  
 All results reported in ug/l unless otherwise specified.  
 ND = not detected at EPA detection limit method 625, (Federal Register, 10/26/84).  
 \* = benzo(b)fluoranthene and benzo(k)fluoranthene co-elute.  
 A = benzo(a)anthracene and chrysene co-elute in high concentrations

**MINAMIN CORPORATION**

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REPORT

LAB # 86-02-109

Results by Sample

Continued From Above

SAMPLE ID 860166

FRACTION 03A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/14/86

Category

B = anthracene and phenanthrene co-elute in high concentrations.  
BL = detected in reagent blank, background subtraction not performed.  
J = estimated value, less than method detection limit.  
CENC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.



**WATKINS CORPORATION**

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Results by Sample

REPORT

LAB # 86-02-109

SAMPLE ID 850166

FRACTION 03A TEST CODE MS 608

NAME Pesticides & PCBs by GC/MS

Date & Time Collected 02/14/86

Category

DATA FILE 50002109C03  
CONC FACTOR

DATE EXTRACTED 02/18/86  
DATE INJECTED 03/05/86

ANALYST

MM

VERIFIED BY LAK  
COMPOUNDS DETECTED 0

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1P	89P	aldrin	ND	2P	102P	alpha BHC	ND
10P	90P	dieldrin	ND	3P	103P	beta BHC	ND
2P	91P	chlordane	ND	4P	104P	gamma BHC	ND
7P	92P	4,4'-DDT	ND	5P	105P	delta BHC	ND
8P	93P	4,4'-DDE	ND	18P	106P	PCB-1242	ND
9P	94P	4,4'-DDD	ND	19P	107P	PCB-1254	ND
11P	95P	alpha endosulfan	ND	20P	108P	PCB-1221	ND
12P	96P	beta endosulfan	ND	21P	109P	PCB-1232	ND
14P	97P	endosulfan sulfate	ND	22P	110P	PCB-1248	ND
14P	98P	endrin	ND	23P	111P	PCB-1260	ND
15P	97P	endrin aldehyde	ND	24P	112P	PCB-1016	ND
16P	100P	heptachlor	ND	25P	113P	toxaphene	ND
17P	101P	heptachlor epoxide	ND				

CORPORATION

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REPORT

Results by Sample

LAB # 86-02-109

Continued From Above

SAMPLE ID 850166

FRACTION 03A

TEST CODE MS 608

NAME Pesticides & PCBs by GC/MS

Date & Time Collected 02/14/86

Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number on chromatogram.

All results reported in micrograms/liter unless otherwise specified.

ND = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).

# CORPORATION

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REPORT

LAB # 86-02-109

Results by Sample

SAMPLE ID reagent blank 625

FRACTION 04A TEST CODE M625 A NAME Method 625 Acid Compounds  
Date & Time Collected not specified Category

DATA FILE SCB02109C01  
CONC. FACTOR 1

DATE EXTRACTED 02/18/86  
DATE INJECTED 03/05/86

ANALYST  
INSTRUMENT

MM  
5100

VERIFIED BY LAK  
COMPOUNDS DETECTED 0

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
11A	21A	2,4,6-trichlorophenol	ND	7A	58A	4-nitrophenol	ND
8A	22A	4-chloro-3-methylphenol	ND	5A	59A	2,4-dinitrophenol	ND
1A	24A	2-chlorophenol	ND	4A	60A	2-methyl-4,6-dinitrophenol	ND
2A	31A	2,4-dichlorophenol	ND	9A	64A	pentachlorophenol	ND
3A	34A	2,4-dimethylphenol	ND	10A	65A	phenol	ND
6A	57A	2-nitrophenol	ND				

3 243

## SURROGATE RECOVERIES

SCAN CODE	COMPOUND	RESULT
378 AS1	d5-phenol	56
273 AS2	2-fluorophenol	52
978 AS3	2,4,6-tribromophenol	83
AS4	d3-phenol	

## NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN# = scan number or retention time on chromatogram.  
All results reported in ug/l unless otherwise specified.

**ANALYTICAL CORPORATION**

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Analytical Serv

REPORT

LAB # 86-02-109

Results by Sample

Continued From Above

SAMPLE ID reagent blank 625

FRACTION 04A

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected not specified

Category

ND = not detected at EPA detection limit method 625, (Federal Register, 11/26/84).  
BL = detected in reagent blank; background subtraction not performed.  
J = estimated value; less than method detection limit.  
CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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REPORT

Results by Sample

LAB # 86-02-109

SAMPLE ID reagent blank 625

FRACTION 04A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected not specified

Category

DATA FILE SCB02109C04		DATE EXTRACTED 02/18/86		ANALYST		MM		VERIFIED BY LAK	
CONC FACTOR 1		DATE INJECTED 03/05/86		INSTRUMENT		5100		COMPOUNDS DETECTED 0	
NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT		
18	1B	acenaphthene	ND	41B	61B	N-nitrosodimethylamine	ND		
4B	5B	benzidine	ND	43B	62B	N-nitrosodiphenylamine	ND		
46B	8B	1,2,4-trichlorobenzene	ND	42B	63B	N-nitrosodi-n-propylamine	ND		
33B	9B	hexachlorobenzene	ND	13B	66B	bis(2-ethylhexyl)phthalate	ND		
36B	12B	hexachloroethane	ND	15B	67B	butyl benzyl phthalate	ND		
11B	18B	bis(2-chloroethyl)ether	ND	26B	68B	di-butyl phthalate	ND		
16B	20B	2-chloronaphthalene	ND	29B	69B	di-n-octyl phthalate	ND		
20B	25B	1,2-dichlorobenzene	ND	24B	70B	diethyl phthalate	ND		
21B	26B	1,3-dichlorobenzene	ND	25B	71B	dimethyl phthalate	ND		
22B	27B	1,4-dichlorobenzene	ND	5B	72B	benzo(a)anthracene A	ND		
23B	28B	3,3'-dichlorobenzidine	ND	6B	73B	benzo(a)pyrene	ND		
27B	35B	2,4-dinitrotoluene	ND	7B	74B	benzo(b)fluoranthene *	ND		
28B	36B	2,6-dinitrotoluene	ND	9B	75B	benzo(k)fluoranthene *	ND		
29B	37B	1,2-diphenylhydrazine	ND	18B	76B	chrysene A	ND		
31B	39B	fluoranthene	ND	2B	77B	acenaphthylene	ND		
17B	40B	4-chlorophenyl phenyl ether	ND	3B	78B	anthracene B	ND		

# **LABORATORY CORPORATION**

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RECEIVED: 02/18/85

Analytical Serv

REPORT

LAB # 86-02-109

Results by Sample

Continued From Above

SAMPLE ID reagent blank 625

FRACTION 04A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected not specified

Category

14B	41B	4-bromophenyl phenyl ether	ND	8B	79B	benzo(ghi)perylene	ND
12B	42B	bis(2-chloroisopropyl)ether	ND	32B	80B	fluorene	ND
10B	43B	bis(2-chloroethoxy)methane	ND	44B	81B	phenanthrene B	ND
34B	52B	hexachlorobutadiene	ND	19B	82B	dibenzo(a,h)anthracene	ND
35B	53B	hexachlorocyclopentadiene	ND	37B	83B	indeno(1,2,3-cd)pyrene	ND
38B	54B	isophorone	ND	45B	84B	pyrene	ND
39B	55B	naphthalene	ND				
40B	56B	nitrobenzene	ND				

## **SURROGATE RECOVERIES**

SCAN CODE	RESULT
3 514 BS1	d5-nitrobenzene 74
246 776 BS2	2-fluorobiphenyl 66
1353 BS3	d14-terphenyl 68
BS4	d10-biphenyl

## **NOTES AND DEFINITIONS FOR THIS REPORT**

SCAN = scan number or retention time on chromatogram.  
 All results reported in ug/l unless otherwise specified.  
 ND = not detected at EPA detection limit method 625, (Federal Register, 10/26/84).  
 + = benzo(b)fluoranthene and benzo(k)fluoranthene co-elute.  
 A = benzo(a)anthracene and chrysene co-elute at high concentrations.

ANALYTICAL  
CORPORATION

PAGE 28

RECEIVED: 02/18/85

Analytical Serv

Results by Sample

REPORT

LAB # 86-02-109

Continued From Above

SAMPLE ID reagent blank 625

FRACTION 04A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected not specified

Category

B = anthracene and phenanthrene co-elute in high concentrations.

BL = detected in reagent blank; background subtraction not performed.

J = estimated value; less than method detection limit.

CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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RECEIVED: 02/18/86

Analytical Serv

REPORT

Results by Sample

LAB # 86-02-109

SAMPLE ID reagent blank 625

FRACTION 04A

TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS

Date & Time Collected not specified

Category

DATA FILE 5CB02109C04

DATE EXTRACTED 02/18/86

ANALYST

VERIFIED BY LAK

CORC FACTOR

DATE INJECTED 03/05/86

MM

COMPOUNDS DETECTED 0

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1P	89P	aldrin	ND	2P	102P	alpha BHC	ND
10P	90P	dieldrin	ND	3P	103P	beta BHC	ND
6P	91P	chlordan	ND	4P	104P	gamma BHC	ND
7P	92P	4,4'-DDT	ND	5P	105P	delta BHC	ND
8P	93P	4,4'-DDE	ND	18P	106P	PCB-1242	ND
9P	94P	4,4'-DDD	ND	19P	107P	PCB-1254	ND
11P	95P	alpha endosulfan	ND	20P	108P	PCB-1221	ND
12P	96P	beta endosulfan	ND	21P	109P	PCB-1232	ND
14P	97P	endosulfan sulfate	ND	22P	110P	PCB-1248	ND
14P	98P	endrin	ND	23P	111P	PCB-1260	ND
15P	99P	endrin aldehyde	ND	24P	112P	PCB-1016	ND
16P	100P	heptachlor	ND	25P	113P	toxaphene	ND
17P	101P	heptachlor epoxide	ND				



**ANALYTICAL CORPORATION**

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RECEIVED: 02/18/85

Analytical Serv

REPORT

Results by Sample

LAB # 86-02-109

Continued From Above

SAMPLE ID reagent blank 625

FRACTION 04A

TEST CODE MS 608

NAME Pesticides & PCBs by GC/MS

Date & Time Collected not specified

Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number on chromatogram.

All results reported in micrograms/liter, unless otherwise specified.

ND = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).

ANALYTICAL  
CORPORATION

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RECEIVED: 02/18/86

Analytical Serv

REPORT

NonReported Work

LAB # 86-02-109

FRACTION AND TEST CODES FOR WORK NOT REPORTED ELSEWHERE

01B : DUP\_INS  
02B : DUP\_INS  
03B : DUP\_INS

ANALYTICAL SERVICES CORPORATION

PAGE 1

RECEIVED: 02/20/86

Analytical Serv

REPORT

LAB # 86-02-123

04/25/86 15:10:25

REPORT Radian

TO BL 4

Austin

ATTEN Larry French

CLIENT PLANT4

COMPANY Plant 4

FACILITY Carswell AFB (Gen. Dynamics)

SAMPLES 3

PREPARED Radian Analytical Services

BY B501 MoPac Blvd.

P.O. Box 9948

Austin, Texas 78766

ATTEN

PHONE (512) 454-4797

CONTACT CONOVER

*Larry K. Mabecker*  
CERTIFIED BY

WORK ID HC (not done earlier)

TAKEN

TRANS

TYPE

P.O. # 212-027-27-

INVOICE under separate cover

Footnotes and Comments

\* Indicates a value less than 5 times the detection limit.  
Potential error for such low values ranges between  
50 and 100%.

@ Indicates that spike recovery for this analysis on the  
specific matrix was not within acceptable limits indicating  
an interferent present.

SAMPLE IDENTIFICATION

01 860118 (8602019-01)

02 860119 (8602019-02)

03 860122 (8602031-01)

Analytical Serv TEST CODES and NAMES used on this report

HC IR Hydrocarbons

WALSH CORPORATION

PAGE 2  
RECEIVED: 02/20/86  
Analytical Serv  
RESULTS BY TEST  
REPORT  
LAB # 86-02-123

TEST CODE	Sample 01	Sample 02	Sample 03
default units	(entered units)	(entered units)	(entered units)
HC IR	<1	<1	<1
mg/L			

# CORPORATION

PAGE 1  
RECEIVED 02/19/86

## Analytical Serv

REPORT  
04/30/86 11:37:25

LAB # 86-02-113

REPORT Radian  
TO BL 4  
Austin  
ATTEN Larry French  
CLIENT PLANT 4  
COMPANY Plant 4  
FACILITY Carswell AFB (Gen. Dynamics)

WORK ID groundwater  
TAKEN WJ,FS  
TRANS Fed Ex  
TYPE  
P.O. # 212-027-27-40  
INVOICE under separate cover

PREPARED Radian Analytical Services  
BY 8501 MoPac Blvd.  
P.O. Box 9948  
Austin, Texas 78766  
ATTEN  
PHONE (512) 454-4797

CERTIFIED BY

CONTACT CONOVER

\*\*Unknown compound eluting here.  
Second column confirmations performed for EPA 601: -01 & -04;  
EPA 602: -01 and -02.  
Value for HC derived from oil and grease data for same split.

### Footnotes and Comments

\* Indicates a value less than 5 times the detection limit.  
Potential error for such low values ranges between  
50 and 100%.

@ Indicates that spike recovery for this analysis on the  
specific matrix was not within acceptable limits indicating  
an interferent present.

### SAMPLE IDENTIFICATION

01 860169  
02 860170  
03 860171  
04 860172  
05 860173  
06 860174

### Analytical Serv TEST CODES and NAMES used on this report

AG E Silver, ICPEs  
AS GA Arsenic, low level  
BA E Barium, ICPEs  
CD E Cadmium, ICPEs  
CR E Chromium, ICPEs  
DG3020 Digestion by Method 3020  
DG6010 Digestion by Method 6010  
GC 601 EPA Method 601/GC  
GC 602 EPA Method 602/GC  
HC IR Hydrocarbons  
HG CA Mercury, Cold Vapor  
ONG IR Oil and Grease, Infrared  
PB GA Lead, low level  
SE GA Selenium, low level

XYLENE Xylenes

# LABORATORY

PAGE 2  
 RECEIVED: 02/19/86  
 Analytical Serv  
 REPORT  
 RESULTS BY TEST  
 LAB # 86-02-113

TEST CODE	Sample 01	Sample 02	Sample 03	Sample 04	Sample 05
default units	(entered units)	(entered units)	(entered units)	(entered units)	(entered units)
AG_E	0.007*	0.008	0.002*	0.004*	
ug/ml					
AS_GA	<.002	<.002	<.002	<.002	
ug/ml					
BA_E	0.041	0.068	0.063	0.043	
ug/ml					
CD_E	148	<.002	<.002	<.002	
ug/ml					
CR_E	<.005	<.005	<.005	<.005	
ug/ml					
DG3020	02/20/86	02/20/86	02/20/86	02/20/86	
date complete					
DG6010	02/20/86	02/20/86	02/20/86	02/20/86	
date complete					
HC_IR	<1	<1	<1	<1	
mg/L					
HG_CA	<.0002	<.0002	<.0002	<.0002	
ug/ml					
ONG_IR	<1	<1	<1	<1	
mg/L					
PB_GA	<.002	<.002	<.002	<.002	
ug/ml					
SE_GA	<.003	<.003	<.003	<.003	
ug/ml					

TEST CODE	Sample 06
default units	(entered units)
HC_IR	<1^
mg/L	ug/g
ONG_IR	<1
mg/L	

CORPORATION

PAGE 4

RECEIVED: 02/19/86

Analytical Serv

Results by Sample

REPORT

LAB # 86-02-113

SAMPLE ID 860169

FRACTION OIC

TEST CODE GC 601

NAME EPA Method 601/GC

Date & Time Collected 02/18/86

Category

DATA FILE	CONC. FACTOR	G	DATE INJECTED	02/19/86	ANALYST	MCL	INSTRUMENT	4	COMPOUNDS DETECTED	4	VERIFIED BY MCL
SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
—	Chloromethane	ND	—	4	Trichloroethene	1.01	—	—	—	—	—
—	Bromomethane	ND	—	—	Dibromochloromethane	*	—	—	—	—	ND
1	Vinyl Chloride	0.20	—	—	1,1,2-Trichloroethane	*	—	—	—	—	ND
—	Chloroethane	ND	—	—	cis-1,3-Dichloropropene	*	—	—	—	—	ND
2	Methylene Chloride	48.7	—	—	2-Chloroethylvinyl Ether	—	—	—	—	—	ND
—	Trichlorofluoromethane	ND	—	—	Bromoform	—	—	—	—	—	ND
—	1,1-Dichloroethene	ND	—	—	1,1,2,2-Tetrachloroethane	#	—	—	—	—	ND
—	1,1-Dichloroethane	ND	—	—	Tetrachloroethylene	#	—	—	—	—	ND
3	trans-1,2-Dichloroethene	6.62**	—	—	Chlorobenzene	—	—	—	—	—	ND
—	Chloroform	ND	—	—	1,3-Dichlorobenzene	—	—	—	—	—	ND
—	1,2-Dichloroethane	ND	—	—	1,2-Dichlorobenzene	—	—	—	—	—	ND
—	1,1,1-Trichloroethane	ND	—	—	1,4-Dichlorobenzene	—	—	—	—	—	ND
—	Carbon Tetrachloride	ND	—	—	—	—	—	—	—	—	—
—	Bromodichloromethane	ND	—	—	—	—	—	—	—	—	—
—	1,2-Dichloropropane	ND	—	—	—	—	—	—	—	—	—
—	trans-1,3-Dichloropropene	ND	—	—	—	—	—	—	—	—	—



CORPORATION

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RECEIVED: 02/19/86

Analytical Serv

REPORT

LAB # 86-02-113

Results by Sample

Continued From Above

SAMPLE ID 860169

FRACTION Q1C TEST CODE GC 601

NAME EPA Method 601/GC

Date & Time Collected 02/18/86

Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

All results reported in ug/L unless otherwise specified.

ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79).

\*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.

#1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

# LABORATORY

PAGE 6

Analytical Serv

REPORT

LAB # 86-02-113

RECEIVED: 02/19/86

Results by Sample

SAMPLE ID 860169

FRACTION 01E

TEST CODE GC 602

NAME EPA Method 602/GC

Date & Time Collected 02/18/86

Category

DATA FILE       D        
CONC. FACTOR       1      

DATE INJECTED 02/20/86

ANALYST       MCL        
INSTRUMENT       d      

VERIFIED BY MCL  
COMPOUNDS DETECTED       0      

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
—	Benzene	ND ;	—	1,4-Dichlorobenzene	ND
3	Toluene	ND ;	—	1,3-Dichlorobenzene	ND
258	Ethyl Benzene	ND ;	—	1,2-Dichlorobenzene	ND
—	Chlorobenzene	ND ;	—		

## NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

All results reported in       ug/L       unless otherwise specified.

ND = not detected at EPA detection limit method 602, (Federal Register, 12/3/79).

RECEIVED: 02/19/86

Analytical Serv

REPORT

Results by Sample

LAB # 86-02-113

SAMPLE ID 860170

FRACTION 02C

TEST CODE GC 601

NAME EPA Method 601/GC

Date & Time Collected 02/18/86

Category

DATA FILE \_\_\_\_\_ G \_\_\_\_\_ DATE INJECTED 02/19/86 ANALYST \_\_\_\_\_ MCL \_\_\_\_\_ VERIFIED BY MCL  
 CONC. FACTOR 1 \_\_\_\_\_ INSTRUMENT \_\_\_\_\_ a \_\_\_\_\_ COMPOUNDS DETECTED 1

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
_____	Chloromethane	ND	_____	Trichloroethene	ND
_____	Bromomethane	ND	_____	Dibromochloromethane *	ND
_____	Vinyl Chloride	ND	_____	1,1,2-Trichloroethane *	ND
_____	Chloroethane	ND	_____	cis-1,3-Dichloropropene *	ND
_____	Methylene Chloride	ND	_____	2-Chloroethylvinyl Ether	ND
_____	Trichlorofluoromethane	ND	_____	Bromoform	ND
_____	1,1-Dichloroethene	ND	_____	1,1,2,2-Tetrachloroethane #	ND
_____	1,1-Dichloroethane	ND	_____	Tetrachloroethylene #	ND
1	trans-1,2-Dichloroethene	0.30	_____	Chlorobenzene	ND
_____	Chloroform	ND	_____	1,3-Dichlorobenzene	ND
_____	1,2-Dichloroethane	ND	_____	1,2-Dichlorobenzene	ND
_____	1,1,1-Trichloroethane	ND	_____	1,4-Dichlorobenzene	ND
_____	Carbon Tetrachloride	ND			
_____	Bromodichloromethane	ND			
_____	1,2-Dichloropropane	ND			
_____	trans-1,3-Dichloropropene	ND			

INFORMATION

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RECEIVED: 02/19/86

Analytical Serv

REPORT

Results by Sample

LAB # 86-02-113

Continued From Above

SAMPLE ID 860170

FRACTION Q2C

TEST CODE GC 601

NAME EPA Method 601/GC

Date & Time Collected 02/18/86

Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

All results reported in ug/L unless otherwise specified.

ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79).

\*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.  
#1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

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RECEIVED: 02/19/86

Analytical Serv

Results by Sample

REPORT

LAB # 86-02-113

SAMPLE ID 860170

FRACTION 02E

TEST CODE GC 602

NAME EPA Method 602/GC

Date & Time Collected 02/18/86

Category

DATA FILE 1 D

DATE INJECTED 02/21/86

ANALYST

MCL

VERIFIED BY MCL

CONC. FACTOR 1

INSTRUMENT

d

COMPOUNDS DETECTED 1

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
—	Benzene	ND :	—	1,4-Dichlorobenzene	ND
3 261	Toluene	15.8 :	—	1,3-Dichlorobenzene	ND
—	Ethyl Benzene	ND :	—	1,2-Dichlorobenzene	ND
—	Chlorobenzene	ND :	—		

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

All results reported in ug/L unless otherwise specified.

ND = not detected at EPA detection limit method 602, (Federal Register, 12/3/79).

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RECEIVED: 02/19/86

Analytical Serv

REPORT

Results by Sample

LAB # 86-02-113

SAMPLE ID 860171

FRACTION Q3C

TEST CODE GC 601

NAME EPA Method 601/GC

Date & Time Collected 02/18/86

Category

DATA FILE		G		DATE INJECTED	02/20/86	ANALYST		MCL		VERIFIED BY MCL	
CONC.	FACTOR	1				INSTRUMENT		g	COMPOUNDS DETECTED	1	
SCAN		COMPOUND	RESULT	SCAN		COMPOUND	RESULT				
		Chloromethane	ND			Trichloroethene	ND				
		Bromomethane	ND			Dibromochloromethane *	ND				
		Vinyl Chloride	ND			1,1,2-Trichloroethane *	ND				
		Chloroethane	ND			cis-1,3-Dichloropropene *	ND				
		Methylene Chloride	ND			2-Chloroethylvinyl Ether	ND				
		Trichlorofluoromethane	ND			Bromoform	ND				
		1,1-Dichloroethene	ND			1,1,2,2-Tetrachloroethane #	ND				
		1,1-Dichloroethane	ND			Tetrachloroethylene #	ND				
1		trans-1,2-Dichloroethene	0.25			Chlorobenzene	ND				
		Chloroform	ND			1,3-Dichlorobenzene	ND				
		1,2-Dichloroethane	ND			1,2-Dichlorobenzene	ND				
		1,1,1-Trichloroethane	ND			1,4-Dichlorobenzene	ND				
		Carbon Tetrachloride	ND								
		Bromodichloromethane	ND								
		1,2-Dichloropropane	ND								
		trans-1,3-Dichloropropene	ND								

3 262

**ANALYTICAL CORPORATION**

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RECEIVED: 02/19/86

Analytical Serv

REPORT

Results by Sample

LAB # 86-02-113

Continued From Above

SAMPLE ID 860171

FRACTION 03C

TEST CODE GC 601

NAME EPA Method 601/GC

Date & Time Collected 02/18/86

Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

All results reported in ug/L unless otherwise specified.

ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79).

\*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.  
#1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

# ANALYTICAL CORPORATION

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RECEIVED: 02/19/86

Analytical Serv

Results by Sample

REPORT

LAB # 86-02-113

SAMPLE ID 860171

FRACTION 03E

TEST CODE GC 602

NAME EPA Method 602/GC

Date & Time Collected 02/18/86

Category

DATA FILE        D DATE INJECTED 02/21/86 ANALYST        MCL        VERIFIED BY MCL  
 CONC. FACTOR        1 INSTRUMENT        d COMPOUNDS DETECTED        1

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
<u>      </u>	Benzene	<u>ND</u> ;	<u>      </u>	1,4-Dichlorobenzene	<u>ND</u>
<u>1</u>	Toluene	<u>2.79</u> ;	<u>      </u>	1,3-Dichlorobenzene	<u>ND</u>
<u>      </u>	Ethyl Benzene	<u>ND</u> ;	<u>      </u>	1,2-Dichlorobenzene	<u>ND</u>
<u>      </u>	Chlorobenzene	<u>ND</u> ;	<u>      </u>		

## NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.  
 All results reported in        ug/L unless otherwise specified.  
 ND = not detected at EPA detection limit method 602, (Federal Register, 12/3/79).



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RECEIVED: 02/19/86

Analytical Serv

Results by Sample

REPORT

LAB # 86-02-113

SAMPLE ID 860172

FRACTION Q4C

TEST CODE GC 601

NAME EPA Method 601/GC

Date & Time Collected 02/18/86

Category

DATA FILE \_\_\_\_\_ G DATE INJECTED 02/21/86

CONC. FACTOR 1

ANALYST \_\_\_\_\_  
INSTRUMENT \_\_\_\_\_

VERIFIED BY MCL \_\_\_\_\_  
COMPOUNDS DETECTED 4

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
_____	Chloromethane	ND	4	Trichloroethene	0.82
_____	Bromomethane	ND	_____	Dibromochloromethane *	ND
1	Vinyl Chloride	0.74	_____	1,1,2-Trichloroethane *	ND
_____	Chloroethane	ND	_____	cis-1,3-Dichloropropene *	ND
2	Methylene Chloride	91.2	_____	2-Chloroethylvinyl Ether	ND
_____	Trichlorofluoromethane	ND	_____	Bromoform	ND
_____	1,1-Dichloroethene	ND	_____	1,1,2,2-Tetrachloroethane #	ND
_____	1,1-Dichloroethane	ND	_____	Tetrachloroethylene #	ND
3	trans-1,2-Dichloroethene	8.50**	_____	Chlorobenzene	ND
_____	Chloroform	ND	_____	1,3-Dichlorobenzene	ND
_____	1,2-Dichloroethane	ND	_____	1,2-Dichlorobenzene	ND
_____	1,1,1-Trichloroethane	ND	_____	1,4-Dichlorobenzene	ND
_____	Carbon Tetrachloride	ND			
_____	Bromodichloromethane	ND			
_____	1,2-Dichloropropane	ND			
_____	trans-1,3-Dichloropropene	ND			

**WILKINSON CORPORATION**

PAGE 14  
 RECEIVED: 02/19/86  
 SAMPLE ID 860172  
 Analytical Serv  
 Results by Sample  
 REPORT  
 LAB # 86-02-113  
 Continued From Above  
 FRACTION 04C TEST CODE GC 601 NAME EPA Method 601/GC  
 Date & Time Collected 02/18/86 Category \_\_\_\_\_

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.  
 All results reported in ug/L unless otherwise specified.  
 ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79).  
 \*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.  
 #1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

AD-A198 443

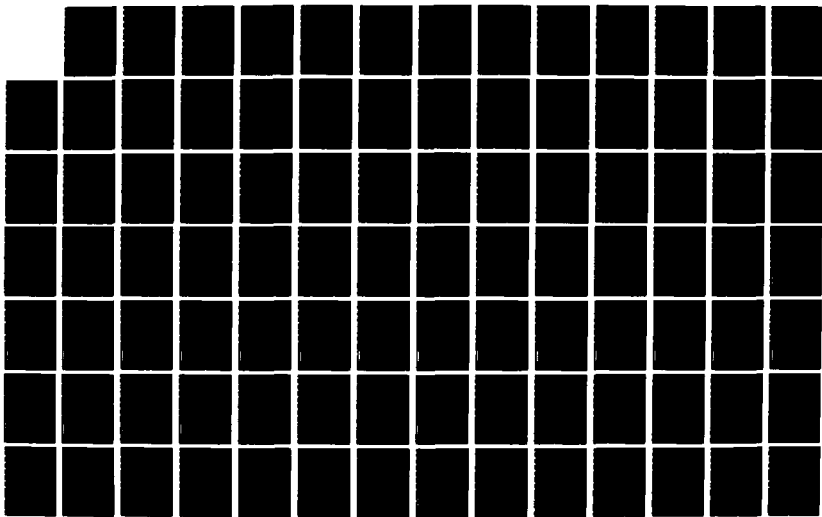
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CONFIRMATION/QUANTIFICATION STAG (U) RADIAN CORP  
AUSTIN TX DEC 87 F33615-83-D-4881

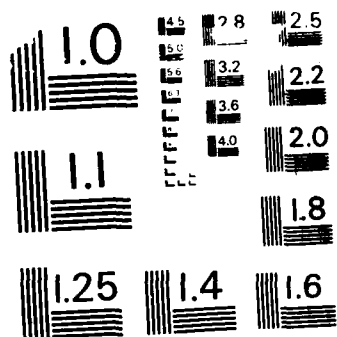
4/6

UNCLASSIFIED

F/G 24/7

NL





MICROCOPY RESOLUTION TEST CHART  
NATIONAL BUREAU OF STANDARDS-1963-A

WATKINS CORPORATION

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RECEIVED: 02/19/86

Analytical Serv

Results by Sample

REPORT

LAB # 86-02-113

SAMPLE ID 860172

FRACTION 04E

TEST CODE GC 602

NAME EPA Method 602/GC

Date & Time Collected 02/18/86

Category

DATA FILE D  
CONC. FACTOR 1

DATE INJECTED 02/21/86

ANALYST             
INSTRUMENT 4

VERIFIED BY MCL  
COMPOUNDS DETECTED 1

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
<u>          </u>	Benzene	<u>ND</u> ;	<u>          </u>	1,4-Dichlorobenzene	<u>ND</u>
<u>1</u>	Toluene	<u>5.88</u> ;	<u>          </u>	1,3-Dichlorobenzene	<u>ND</u>
<u>          </u>	Ethyl Benzene	<u>ND</u> ;	<u>          </u>	1,2-Dichlorobenzene	<u>ND</u>
<u>          </u>	Chlorobenzene	<u>ND</u> ;			

3 267

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

All results reported in ug/L unless otherwise specified.

ND = not detected at EPA detection limit method 602, (Federal Register, 12/3/79).

CORPORATION

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-113

SAMPLE ID 860173

FRACTION 05B

TEST CODE XYLENE

NAME Xylenes

Date & Time Collected 02/18/86

Category

DATA FILE D  
CONC. FACTOR 1

DATE INJECTED 02/21/86

ANALYST MCL  
INSTRUMENT d

VERIFIED BY MCL  
COMPOUNDS DETECTED 0

SCAN

COMPOUND

RESULT

p-xylene

ND :

m-xylene

ND :

o-xylene

ND :

3 268

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.  
All results reported in ug/L unless otherwise specified.  
ND = not detected.

CORPORATION

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REPORT

NonReported Work

LAB # 86-02-113

FRACTION AND TEST CODES FOR WORK NOT REPORTED ELSEWHERE

01D	:	DUP601	01F	:	DUP602	01H	:	DUP_NS
02D	:	DUP601	02F	:	DUP602	02H	:	DUP_NS
03D	:	DUP601	03F	:	DUP602	03H	:	DUP_NS
04D	:	DUP601	04F	:	DUP602	04H	:	DUP_NS
05C	:	DUP_NS						

# CORPORATION

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Analytical Serv

REPORT

LAB # 86-02-116

03/16/86 13:58:53

REPORT Radian Corporation

TO LAMPY, French

Austin, Texas

ATTEN

CLIENT PLANT 4 SAMPLES 6

COMPANY General Dynamics

FACILITY GEH Plant 4, Bldg 4

Austin, Texas

WORK ID General Dynamics-Ft. Worth

TAKEN 2/18/86

TRANS Federal (no airbill)

TYPE H2O

F O # 212-027-27-40

INVOICE under separate cover

PREPARED Radian Analytical Services

BY 8501 MoPac Blvd

P. O. Box 5948

Austin, Texas 78766

ATTEN

PHONE (512) 454-4797

CONTACT FRENCH

*Lucia P. French*  
CERTIFIED BY

Duplicate analysis 625 performed on -02 (860170);

Matrix spike 625 performed on -01 (860169).

## Footnotes and Comments

\* Indicates a value less than 5 times the detection limit.  
Potential error for such low values ranges between  
50 and 100%.

@ Indicates that spike recovery for this analysis on the  
specific matrix was not within acceptable limits indicating  
an interferent present.

## SAMPLE IDENTIFICATION

01 860169  
02 860170  
03 860171  
04 860172  
05 duplicate analysis 625  
06 matrix spike 625  
07 reagent blank 625

## Analytical Serv TEST CODES and NAMES used on this report

EX 625 Extraction only - 625 BN/A  
M625 A Method 625 Acid Compounds  
M625 B Method 625 Base/Neutrals  
M5 608 Pesticides & PCBs by GC/MS



**CORPORATION**

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Analytical Serv

REPORT

RESULTS BY TEST

LAB # 86-02-116

TEST CODE	Sample 01 (entered units)	Sample 02 (entered units)	Sample 03 (entered units)	Sample 04 (entered units)	Sample 05 (entered units)
EX 625	02/19/86	02/19/86	02/19/86	02/19/86	02/19/86
date complete					

TEST CODE	Sample 06 (entered units)
EX 625	02/19/86
date complete	

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-116

SAMPLE ID 860169

FRACTION 01A

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected 02/18/86

Category

DATA FILE SC002116C01  
CONC FACTOR 1

DATE EXTRACTED 02/24/86  
DATE INJECTED 03/06/86

ANALYST  
INSTRUMENT

MM  
5100

VERIFIED BY LAK  
COMPOUNDS DETECTED 1

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
11A	21A	2,4,6-trichlorophenol	ND	7A	58A	4-nitrophenol	ND
8A	22A	4-chloro-3-methylphenol	ND	5A	59A	2,4-dinitrophenol	ND
1A	24A	2-chlorophenol	ND	4A	60A	2-methyl-4,6-dinitrophenol	ND
2A	31A	2,4-dichlorophenol	ND	9A	64A	pentachlorophenol	ND
3A	34A	2,4-dimethylphenol	ND	10A	400 65A	phenol	2
6A	57A	2-nitrophenol	ND				

3 272

**SURROGATE RECOVERIES**

SCAN CODE	COMPOUND	RESULT
379 AS1	d5-phenol	54
293 AS2	2-fluorophenol	48
972 AS3	2,4,6-tribromophenol	82
AS4	d3-phenol	

**NOTES AND DEFINITIONS FOR THIS REPORT**

SCAN = scan number or retention time on chromatogram.  
All results reported in ug/l unless otherwise specified.

**ENVIRONMENTAL  
CORPORATION**

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Analytical Serv

REPORT

LAB # 86-02-116

Results by Sample

Continued From Above

SAMPLE ID 860169

FRACTION 01A

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected 02/18/86

Category

ND = not detected at EPA detection limit method 625, (Federal Register, 11/26/84).  
BL = detected in reagent blank; background subtraction not performed.  
J = estimated value; less than method detection limit.  
CONC. FACTOR indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-116

SAMPLE ID 860169

FRACTION 01A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/18/86

Category

DATA FILE	SCU02116C01	DATE EXTRACTED	02/24/86	ANALYST	MM	VERIFIED BY	LAK
CONC. FACTOR	1	DATE INJECTED	03/06/86	INSTRUMENT	5100	COMPOUNDS DETECTED	1
NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1B	1B	acenaphthene	ND	41B	61B	N-nitrosodimethylamine	ND
4B	5B	benzidine	ND	43B	62B	N-nitrosodiphenylamine	ND
46B	8B	1,2,4-trichlorobenzene	ND	42B	63B	N-nitrosodi-n-propylamine	ND
33B	9B	hexachlorobenzene	ND	13B	66B	bis(2-ethylhexyl)phthalate	ND
36B	12B	hexachloroethane	ND	15B	67B	butyl benzyl phthalate	ND
11B	18B	bis(2-chloroethyl)ether	ND	26B	1204	di-butyl phthalate	1 BL
16B	20B	2-chloronaphthalene	ND	29B	69B	di-n-octyl phthalate	ND
10B	25B	1,2-dichlorobenzene	ND	24B	70B	diethyl phthalate	ND
21B	26B	1,3-dichlorobenzene	ND	25B	71B	dimethyl phthalate	ND
22B	27B	1,4-dichlorobenzene	ND	5B	72B	benzo(a)anthracene A	ND
20B	28B	3,3'-dichlorobenzidine	ND	6B	73B	benzo(a)pyrene	ND
27B	35B	2,4-dinitrotoluene	ND	7B	74B	benzo(b)fluoranthene *	ND
26B	36B	2,6-dinitrotoluene	ND	9B	75B	benzo(k)fluoranthene *	ND
24B	37B	1,2-diphenylhydrazine	ND	18B	76B	chrysene A	ND
31B	39B	fluoranthene	ND	2B	77B	acenaphthylene	ND
17B	40B	4-chlorophenyl ether	ND	5B	78B	anthracene B	ND

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Analytical Serv  
Results by Sample  
REPORT  
LAB # 86-02-116  
Continued From Above

SAMPLE ID 860169  
FRACTION 01A  
Date & Time Collected 02/18/86  
TEST CODE M625 B  
NAME Method 625 Base/Neutrals  
Category

14B	41B	4-bromophenyl phenyl ether	ND	8B	79B	benzo(ghi)perylene	ND
12B	42B	bis(2-chloroisopropyl)ether	ND	32B	80B	fluorene	ND
10B	43B	bis(2-chloroethoxy)methane	ND	44B	81B	phenanthrene B	ND
34B	52B	hexachlorobutadiene	ND	19B	82B	dibenzo(a,h)anthracene	ND
35B	53B	hexachlorocyclopentadiene	ND	37B	83B	indeno(1,2,3-cd)pyrene	ND
38B	54B	isophorone	ND	45B	84B	pyrene	ND
39B	55B	naphthalene	ND				
40B	56B	nitrobenzene	ND				

**SURROGATE RECOVERIES**

SCAN CODE	RESULT
514 BS1	d5-nitrobenzene 114
777 BS2	2-fluorobiphenyl 131
1354 BS3	d14-terphenyl 104
BS4	d10-biphenyl

3 275

**NOTES AND DEFINITIONS FOR THIS REPORT.**

SCAN = scan number or retention time on chromatogram.  
All results reported in ug/l unless otherwise specified.  
ND = not detected at EPA detection limit method 625, (Federal Register, 10/26/84).  
+ = benzo(b)fluoranthene and benzo(k)fluoranthene co-elute.  
A = benzo(a)anthracene and chrysene co-elute at high concentrations.

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-116

Continued From Above

SAMPLE ID 860169

FRACTION 01A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/18/86

Category

B = anthracene and phenanthrene co-elute in high concentrations.

BL = detected in reagent blank; background subtraction not performed.

J = estimated value; less than method detection limit.

CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-116

SAMPLE ID 860169

FRACTION 01A TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS

Date & Time Collected 02/18/86

Category

DATA FILE 50002116C01

DATE EXTRACTED 02/24/86

ANALYST MM

VERIFIED BY LAK  
COMPOUNDS DETECTED 0

CONC. FACTOR

DATE INJECTED 03/06/86

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1P	89P	aldrin	ND	2P	102P	alpha BHC	ND
10P	90P	dieldrin	ND	3P	103P	beta BHC	ND
6P	91P	chlordane	ND	4P	104P	gamma BHC	ND
7P	92P	4,4'-DDT	ND	5P	105P	delta BHC	ND
8P	93P	4,4'-DDE	ND	18P	106P	PCB-1242	ND
9P	94P	4,4'-DDD	ND	19P	107P	PCB-1254	ND
11P	95P	alpha endosulfan	ND	20P	108P	PCB-1221	ND
12P	96P	beta endosulfan	ND	21P	109P	PCB-1232	ND
14P	97P	endosulfan sulfate	ND	22P	110P	PCB-1248	ND
14P	98P	endrin	ND	23P	111P	PCB-1260	ND
15P	99P	endrin aldehyde	ND	24P	112P	PCB-1016	ND
16P	100P	heptachlor	ND	25P	113P	toxaphene	ND
17P	101P	heptachlor epoxide	ND				

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REPORT

Results by Sample

LAB # 86-02-116

Continued From Above

SAMPLE ID 860169

FRACTION 01A TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS

Date & Time Collected 02/18/86

Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number on chromatogram.

All results reported in micrograms/liter unless otherwise specified.

ND = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).



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Results by Sample

REPORT

LAB # 86-02-116

SAMPLE ID 860170

FRACTION 02A

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected 02/18/86

Category

DATA FILE 5CU02116C02  
CONC. FACTOR 1

DATE EXTRACTED 02/24/86  
DATE INJECTED 03/06/86

ANALYST  
INSTRUMENT

MM  
5100

VERIFIED BY LAK  
COMPOUNDS DETECTED 1

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
11A	21A	2,4,6-trichlorophenol	ND	7A	58A	4-nitrophenol	ND
8A	22A	4-chloro-3-methylphenol	ND	5A	59A	2,4-dinitrophenol	ND
1A	24A	2-chlorophenol	ND	4A	60A	2-methyl-4,6-dinitrophenol	ND
2A	31A	2,4-dichlorophenol	ND	9A	64A	pentachlorophenol	ND
3A	34A	2,4-dimethylphenol	ND	10A	400	phenol	1
6A	57A	2-nitrophenol	ND				

3 279

SURROGATE RECOVERIES

SCAN CODE	COMPOUND	RESULT
378 451	45-phenol	85
372 452	2-fluorophenol	80
379 453	2,4,6-tribromophenol	135
454	43-phenol	

NOTES AND DEFINITIONS FOR THIS REPORT

SCAN = scan number or retention time on chromatogram  
All results reported in ug/l unless otherwise specified

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-116

Continued From Above

SAMPLE ID 860170

FRACTION 02A

TEST CODE M625 A

NAME Method 625 Acid Compounds

Date & Time Collected 02/18/86

Category

ND = not detected at EPA detection limit method 625, (Federal Register, 11/26/84).  
 BL = detected in reagent blank; background subtraction not performed.  
 J = estimated value; less than method detection limit.  
 CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection  
 limits should be multiplied by conc. factor.

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Results by Sample

REPORT

LAB # 86-02-116

SAMPLE ID 860170

FRACTION 02A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/18/86

Category

DATA FILE	SCU02116C02	DATE EXTRACTED	02/24/86	ANALYST	MM	VERIFIED BY	LAK
CONC. FACTOR	1	DATE INJECTED	03/06/86	INSTRUMENT	5100	COMPOUNDS DETECTED	0
NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1B	1B	acenaphthene	ND	41B	61B	N-nitrosodimethylamine	ND
4B	52	benzidine	ND	43B	62B	N-nitrosodiphenylamine	ND
46B	83	1,2,4-trichlorobenzene	ND	42B	63B	N-nitrosodi-n-propylamine	ND
33B	98	hexachlorobenzene	ND	13B	66B	bis(2-ethylhexyl)phthalate	ND
36B	123	hexachloroethane	ND	15B	67B	butyl benzyl phthalate	ND
11B	183	bis(2-chloroethyl)ether	ND	26B	68B	di-butyl phthalate	ND
16B	202	2-chloronaphthalene	ND	29B	69B	di-n-octyl phthalate	ND
20B	255	1,2-dichlorobenzene	ND	24B	70B	diethyl phthalate	ND
21B	263	1,3-dichlorobenzene	ND	25B	71B	dimethyl phthalate	ND
22B	273	1,4-dichlorobenzene	ND	5B	72B	benzo(a)anthracene A	ND
23B	283	3,3'-dichlorobenzidine	ND	6B	73B	benzo(a)pyrene	ND
27B	353	2,4-dinitrotoluene	ND	76	74B	benzo(b)fluoranthene *	ND
28B	358	2,6-dinitrotoluene	ND	96	75B	benzo(k)fluoranthene *	ND
29B	373	1,2-diphenylhydrazine	ND	10B	76B	chrysene A	ND
31B	393	fluoranthene	ND	2B	77B	acenaphthylene	ND
17B	403	4-chlorophenyl phenyl ether	ND	3B	78B	anthracene B	ND

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Results by Sample

REPORT

LAB # 86-02-116

Continued From Above

SAMPLE ID 860170

FRACTION 02A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/18/86

Category

148	41B	4-bromophenyl phenyl ether	ND	88	79B	benzo(ghi)perylene	ND
128	42B	bis(2-chloroisopropyl)ether	ND	32B	80B	fluorene	ND
108	43B	bis(2-chloroethoxy)methane	ND	44B	81B	phenanthrene B	ND
34B	52B	hexachlorobutadiene	ND	19B	82B	dibenzo(a,h)anthracene	ND
35B	53B	hexachlorocyclopentadiene	ND	37B	83B	indeno(1,2,3-cd)pyrene	ND
38B	54B	isophorone	ND	45B	84B	pyrene	ND
39B	55B	naphthalene	ND				
40B	56B	nitrobenzene	ND				

**SURROGATE RECOVERIES**

SCAN CODE	RESULT
514 BS1	d5-nitrobenzene 115
777 BS2	2-fluorobiphenyl 132
1354 BS3	d14-terphenyl 140
BS4	d10-biphenyl

3 282

**NOTES AND DEFINITIONS FOR THIS REPORT**

SCAN = scan number or retention time on chromatogram.  
 All results reported in ug/l unless otherwise specified.  
 ND = not detected at EPA detection limit method 625, (Federal Register, 10/26/84).  
 \* = benzo(b)fluoranthene and benzo(k)fluoranthene co-elute.  
 A = benzo(a)anthracene and chrysene co-elute at high concentrations.

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Analytical Serv  
Results by Sample

LAB # 86-02-116  
Continued From Above

SAMPLE ID 860170

FRACTION 02A TEST CODE M625 B NAME Method 625 Base/Neutrals  
Date & Time Collected 02/18/86 Category

8 = anthracene and phenanthrene co-elute in high concentrations.  
BL = detected in reagent blank; background subtraction not performed.  
J = estimated value; less than method detection limit  
CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

# CORPORATION

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-116

SAMPLE ID 850170

FRACTION 02A

TEST CODE MS 608

NAME Pesticides & PCBs by GC/MS

Date & Time Collected 02/18/86

Category

DATA FILE 5002116C02  
CONC. FACTOR

DATE EXTRACTED 02/24/86  
DATE INJECTED 03/04/86

ANALYST

HM

VERIFIED BY LAK  
COMPOUNDS DETECTED 0

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1P	89P	aldrin	ND	2P	102P	alpha BHC	ND
10P	90P	dieldrin	ND	3P	103P	beta BHC	ND
6P	91P	chlordane	ND	4P	104P	gamma BHC	ND
7P	92P	4,4'-DDT	ND	5P	105P	delta BHC	ND
8P	93P	4,4'-DDE	ND	18P	106P	PCB-1242	ND
9P	94P	4,4'-DDD	ND	19P	107P	PCB-1254	ND
11P	95P	alpha endosulfan	ND	20P	108P	PCB-1221	ND
12P	96P	beta endosulfan	ND	21P	109P	PCB-1232	ND
14P	97P	endosulfan sulfate	ND	22P	110P	PCB-1248	ND
14P	98P	endrin	ND	23P	111P	PCB-1260	ND
15P	99P	endrin aldehyde	ND	24P	112P	PCB-1016	ND
16P	100P	heptachlor	ND	25P	113P	toxaphene	ND
17P	101P	heptachlor epoxide	ND				

**LABORATORY CORPORATION**

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REPORT

Results by Sample

LAB # 86-02-116

Continued From Above

SAMPLE ID 860170

FRACTION 02A

TEST CODE MS 608

NAME Pesticides & PCBs by GC/MS

Date & Time Collected 02/18/86

Category

**NOTES AND DEFINITIONS FOR THIS REPORT**

SCAN = scan number on chromatogram.

All results reported in micrograms/liter unless otherwise specified.

ND = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).

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Analytical Serv  
Results by Sample

LAB # 86-02-116

SAMPLE ID 860171

FRACTION 03A TEST CODE M625 A NAME Method 625 Acid Compounds  
Date & Time Collected 02/18/86 Category

DATA FILE SC002116C03  
CONC FACTOR 1

DATE EXTRACTED 02/24/86  
DATE INJECTED 03/06/86

ANALYST  
INSTRUMENT 5100

VERIFIED BY LAK  
COMPOUNDS DETECTED 1

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
11A	21A	2,4,6-trichlorophenol	ND	7A	58A	4-nitrophenol	ND
8A	22A	4-chloro-3-methylphenol	ND	5A	59A	2,4-dinitrophenol	ND
1A	24A	2-chlorophenol	ND	4A	60A	2-methyl-4,6-dinitrophenol	ND
2A	31A	2,4-dichlorophenol	ND	9A	64A	pentachlorophenol	ND
3A	34A	2,4-dimethylphenol	ND	10A	401 65A	phenol	2
6A	57A	2-nitrophenol	ND				

3 286

SURROGATE RECOVERIES

SCAN CODE	COMPOUND	RESULT
379 AS1	45-phenol	79
275 AS2	2-fluorophenol	79
579 AS3	2,4,6-tribromophenol	162
AS4	43-phenol	

NOTES AND DEFINITIONS FOR THIS REPORT

SCAN = scan number or retention time on chromatogram  
All results reported in ug/l unless otherwise specified.



**CONFORMATION  
CORPORATION**

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SAMPLE ID 850171

Analytical Serv

REPORT

Results by Sample

LAB # 86-02-116

Continued From Above

FRACTION 03A TEST CODE M625 A NAME Method 625 Acid Compounds  
Date & Time Collected 02/18/86 Category

ND = not detected at EPA detection limit method 625, (Federal Register, 11/26/84).  
SL = detected in reagent blank, background subtraction not performed.  
J = estimated value; less than method detection limit.  
CONC FACTOR: indicates dilution of sample if greater than one (1). Minimum detection  
limits should be multiplied by conc. factor.

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-116

SAMPLE ID 860171

FRACTION 03A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/18/86

Category

DATA FILE SCU02116003		DATE EXTRACTED 02/24/86		ANALYST		MM		VERIFIED BY LAK	
CONC. FACTOR 1		DATE INJECTED 03/06/86		INSTRUMENT		5100		COMPOUNDS DETECTED 1	
NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT		
18	18	acenaphthene	ND	41B	61B	N-nitrosodimethylamine	ND		ND
46	5B	benzidine	ND	43B	62B	N-nitrosodiphenylamine	ND		ND
453	8B	1,2,4-trichlorobenzene	ND	42B	63B	N-nitrosodi-n-propylamine	ND		ND
338	9B	hexachlorobenzene	ND	13B	66B	bis(2-ethylhexyl)phthalate	ND		ND
363	12B	hexachloroethane	ND	15B	67B	butyl benzyl phthalate	ND		ND
118	16B	bis(2-chloroethyl)ether	ND	26B	1204	di-butyl phthalate	1 BL		
168	20B	2-chloronaphthalene	ND	29B	69B	di-n-octyl phthalate	ND		ND
208	25B	1,2-dichlorobenzene	ND	24B	70B	diethyl phthalate	ND		ND
218	26B	1,3-dichlorobenzene	ND	25B	71B	dimethyl phthalate	ND		ND
228	27B	1,4-dichlorobenzene	ND	5B	72B	benzo(a)anthracene A	ND		ND
238	28B	3,3'-dichlorobenzidine	ND	6B	73B	benzo(a)pyrene	ND		ND
278	35B	2,4-dinitrotoluene	ND	7B	74B	benzo(b)fluoranthene *	ND		ND
288	36B	2,6-dinitrotoluene	ND	9B	75B	benzo(k)fluoranthene *	ND		ND
298	37B	1,2-diphenylhydrazine	ND	18B	76B	chrysene A	ND		ND
318	39B	fluoranthene	ND	2B	77B	acenaphthylene	ND		ND
178	40B	4-chlorophenyl phenyl ether	ND	3B	78B	anthracene B	ND		ND

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-116

Continued From Above

SAMPLE ID 860171

FRACTION 03A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/18/86

Category

14B	41B	4-bromophenyl phenyl ether	ND	8E	74B	benzo(ghi)perylene	ND
12B	42B	bis(2-chloroisopropyl)ether	ND	32B	80B	fluorene	ND
10B	43B	bis(2-chloroethoxy)methane	ND	44B	81B	phenanthrene B	ND
34B	52B	hexachlorobutadiene	ND	19B	82B	dibenzo(a,h)anthracene	ND
35B	53B	hexachlorocyclopentadiene	ND	37B	83B	indeno(1,2,3-cd)pyrene	ND
38B	54B	isophorone	ND	45B	84B	pyrene	ND
39B	55B	naphthalene	ND				
40B	56B	nitrobenzene	ND				

SURROGATE RECOVERIES

SCAN CODE	RESULT
514 BS1	d5-nitrobenzene 55
777 BS2	2-fluorobiphenyl 63
1353 BS3	d14-terphenyl 69
BS4	d10-biphenyl

3 289

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram  
 All results reported in this report unless otherwise specified  
 ND = not detected at EPA detection limit, method 625, (Federal Register, 10/26/84)  
 \* = benzo(b)fluoranthene and benzo(k)fluoranthene to elute  
 A = benzo(a)anthracene and chrysene to elute at high concentrations.

**ANALYTICAL CORPORATION**

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REPORT

Results by Sample

LAB # 86-02-116

Continued From Above

SAMPLE ID 860171

FRACTION 03A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/18/86

Category

B = anthracene and phenanthrene co-elute in high concentrations.

SL = detected in reagent blank; background subtraction not performed.

J = estimated value; less than method detection limit.

CCRC FACTOR indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Results by Sample

LAB # 86-02-116

SAMPLE ID 860171

FRACTION 03A

TEST CODE MS 608

NAME Pesticides & PCBs by GC/MS

Date & Time Collected 02/18/86

Category

DATA FILE 8602116C03

DATE EXTRACTED 02/24/86

ANALYST

VERIFIED BY LAK

CONC. FACTOR

DATE INJECTED 03/06/86

MM

COMPOUNDS DETECTED 0

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1P	89P	aldrin	ND	2P	102P	alpha BHC	ND
10P	90P	dieldrin	ND	3P	103P	beta BHC	ND
6P	91P	chlordane	ND	4P	104P	gamma BHC	ND
7P	92P	4,4'-DDT	ND	5P	105P	delta BHC	ND
8P	93P	4,4'-DDE	ND	18P	106P	PCB-1242	ND
9P	94P	4,4'-DDD	ND	19P	107P	PCB-1254	ND
11P	95P	alpha endosulfan	ND	20P	108P	PCB-1221	ND
12P	96P	beta endosulfan	ND	21P	109P	PCB-1232	ND
14P	97P	endosulfan sulfate	ND	22P	110P	PCB-1248	ND
14P	98P	endrin	ND	23P	111P	PCB-1260	ND
15P	99P	endrin aldehyde	ND	24P	112P	PCB-1016	ND
16P	100P	heptachlor	ND	25P	113P	toxaphene	ND
17P	101P	heptachlor epoxide	ND				

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REPORT

LAB # 86-02-116

Results by Sample

Continued From Above

SAMPLE ID 850171

FRACTION 02A

TEST CODE MS 608

NAME Pesticides & PCBs by GC/MS

Date & Time Collected 02/18/86

Category

NOTES AND DEFINITIONS FOR THIS REPORT

SCAN = scan number on chromatogram

All results reported in micrograms/liter unless otherwise specified.

ND = not detected at EPA detection limit method 625, (Federal Register, 12/3/79)

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Results by Sample

REPORT

LAB # 86-02-116

SAMPLE ID 860172

FRACTION 04A

TEST CODE N625 A

NAME Method 625 Acid Compounds

Date & Time Collected 02/18/86

Category

DATA FILE SC02116C04  
CONC. FACTOR 1

DATE EXTRACTED 02/20/86  
DATE INJECTED 03/07/86

ANALYST  
INSTRUMENT

MM  
5100  
COMPOUNDS DETECTED 0

VERIFIED BY LAK

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
11A	21A	2,4,6-trichlorophenol	ND	7A	58A	4-nitrophenol	ND
2A	22A	4-chloro-3-methylphenol	ND	5A	59A	2,4-dinitrophenol	ND
1A	24A	2-chlorophenol	ND	4A	60A	2-methyl-4,6-dinitrophenol	ND
2A	31A	2,4-dichlorophenol	ND	9A	64A	pentachlorophenol	ND
3A	34A	2,4-dimethylphenol	ND	10A	65A	phenol	ND
6A	57A	2-nitrophenol	ND				

3 293

**SURROGATE RECOVERIES**

SCAN CODE	COMPOUND	RESULT
390 AS1	d5-phenol	52
287 AS2	2-fluorophenol	49
526 AS3	2,4,6-tribromophenol	44
AS4	d3-phenol	

NOTES AND DEFINITIONS FOR THIS REPORT:

SCAN = scan number or retention time on chromatogram

All results reported in 0971 unless otherwise specified

MINIMUM  
CORPORATION

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Analytical Serv

REPORT

LAB # 86-02-116

Results by Sample

Continued From Above

SAMPLE ID 860172

FRACTION 04A

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected 02/18/86

Category

ND = not detected at EPA detection limit method 625, (Federal Register, 11/26/84).

BL = detected in reagent blank, background subtraction not performed.

J = estimated value; less than method detection limit.

CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.



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REPORT

Results by Sample

LAB # 86-02-116

SAMPLE ID 860172

FRACTION 04A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/18/86

Category

DATA FILE 50002116C04		DATE EXTRACTED 02/20/86		ANALYST		HM		VERIFIED BY LAK	
CONC. FACTOR 1		DATE INJECTED 03/07/86		INSTRUMENT		5100		COMPOUNDS DETECTED 3	
NPDES SCAN	EPA	COMPOUND	RESULT	NPDES	SCAN	EPA	COMPOUND	RESULT	
1B	1B	acenaphthene	ND	41B		61B	N-nitrosodimethylamine	ND	
4B	5B	benzidine	ND	43B		62B	N-nitrosodiphenylamine	ND	
46B	8B	1,2,4-trichlorobenzene	ND	42B		63B	N-nitrosodi-n-propylamine	ND	
23B	9B	hexachlorobenzene	ND	13B	1519	66B	bis(2-ethylhexyl)phthalate	1 BL	
34B	12B	hexachloroethane	ND	15B		67B	butyl benzyl phthalate	ND	
11B	18B	bis(2-chloroethyl)ether	ND	26B	1192	68B	di-butyl phthalate	2 BL	
16B	20B	2-chloronaphthalene	ND	29B		69B	di-n-octyl phthalate	ND	
20B	455	1,2-dichlorobenzene	1	24B		70B	diethyl phthalate	ND	
21B	26B	1,3-dichlorobenzene	ND	25B		71B	dimethyl phthalate	ND	
22B	27B	1,4-dichlorobenzene	ND	5B		72B	benzo(a)anthracene A	ND	
23B	28B	3,3'-dichlorobenzidine	ND	6B		73B	benzo(a)pyrene	ND	
27B	35B	2,4-dinitrotoluene	ND	7B		74B	benzo(b)fluoranthene *	ND	
28B	36B	2,6-dinitrotoluene	ND	9B		75B	benzo(k)fluoranthene *	ND	
29B	37B	1,2-diphenylhydrazine	ND	18B		76B	chrysene A	ND	
31B	39B	fluoranthene	ND	2B		77B	acenaphthylene	ND	
17B	40B	4-chlorophenyl phenyl ether	ND	3B		78B	anthracene B	ND	

# WATKINS CORPORATION

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Results by Sample

REPORT

LAB # 86-02-116

Continued From Above

SAMPLE ID 850172

FRACTION 04A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/18/86

Category

14B	41B	4-bromophenyl phenyl ether	ND	8B	79B	benzo(ghi)perylene	ND
12B	42B	bis(2-chloroisopropyl)ether	ND	32B	80B	fluorene	ND
10B	43B	bis(2-chloroethoxy)methane	ND	44B	81B	phenanthrene B	ND
34B	52B	hexachlorobutadiene	ND	19B	82B	dibenzo(a,h)anthracene	ND
35B	53B	hexachlorocyclopentadiene	ND	37B	83B	indeno(1,2,3-cd)pyrene	ND
36B	54B	isophorone	ND	45B	84B	pyrene	ND
39B	55B	naphthalene	ND				
40B	56B	nitrobenzene	ND				

## SURROGATE RECOVERIES

SCAN CODE	RESULT
3 503 BS1	d5-nitrobenzene 110
296 764 BS2	2-fluorobiphenyl 122
1340 BS3	d14-terphenyl 132
BS4	d10-biphenyl

## NOTES AND DEFINITIONS FOR THIS REPORT

SCAN = scan number or retention time on chromatogram.  
 All results reported in ug/l unless otherwise specified.  
 ND = not detected at EPA detection limit method 625, (Federal Register, 10/26/84).  
 + = benzo(b)fluoranthene and benzo(k)fluoranthene co-elute  
 A = benzo(a)anthracene and chrysene co-elute at high concentrations.

**MAXAM CORPORATION**

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Results by Sample

REPORT

LAB # 86-02-116

Continued From Above

SAMPLE ID 860172

FRACTION 04A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/18/86

Category

B = anthracene and phenanthrene co-elute in high concentrations.  
SL = detected in reagent blank; background subtraction not performed.  
J = estimated value; less than method detection limit.  
CENC FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

# CORPORATION

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REPORT

Results by Sample

LAB # 86-02-116

SAMPLE ID 860172

FRACTION 04A TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS  
Date & Time Collected 02/18/86 Category

DATA FILE 50002116C04  
CONC FACTOR

DATE EXTRACTED 02/20/86  
DATE INJECTED 03/07/86

ANALYST MM

VERIFIED BY LAK  
COMPOUNDS DETECTED 0

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1P	89P	aldrin	ND	2P	102P	alpha BHC	ND
10P	90P	dieldrin	ND	3P	103P	beta BHC	ND
6P	91P	chlordane	ND	4P	104P	gamma BHC	ND
7P	92P	4,4'-DDT	ND	5P	105P	delta BHC	ND
8P	93P	4,4'-DDE	ND	18P	106P	PCB-1242	ND
9P	94P	4,4'-DDD	ND	19P	107P	PCB-1254	ND
11P	95P	alpha endosulfan	ND	20P	108P	PCB-1221	ND
12P	96P	beta endosulfan	ND	21P	109P	PCB-1232	ND
14P	97P	endosulfan sulfate	ND	22P	110P	PCB-1248	ND
14P	98P	endrin	ND	23P	111P	PCB-1260	ND
15P	99P	endrin aldehyde	ND	24P	112P	PCB-1016	ND
16P	100P	heptachlor	ND	25P	113P	toxaphene	ND
17P	101P	heptachlor epoxide	ND				

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Analytical Serv

REPORT

LAB # 86-02-116

Results by Sample

Continued From Above

SAMPLE ID 850172

FRACTION 04A TEST CODE MS 608

NAME Pesticides & PCBs by GC/MS

Date & Time Collected 02/18/86

Category

NOTES AND DEFINITIONS FOR THIS REPORT

SCAN = scan number on chromatogram.

All results reported in micrograms/liter unless otherwise specified.

(ND) = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-116

SAMPLE ID duplicate analysis 625

FRACTION 05B

TEST CODE N625 A NAME Method 625 Acid Compounds

Date & Time Collected not specified

Category

DATA FILE 5CD02116C05  
CONC. FACTOR 1

DATE EXTRACTED 02/20/86  
DATE INJECTED 03/07/86

ANALYST  
INSTRUMENT

WJL  
5100

VERIFIED BY LAK  
COMPOUNDS DETECTED 1

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
11A	21A	2,4,6-trichlorophenol	ND	7A	58A	4-nitrophenol	ND
8A	22A	4-chloro-3-methylphenol	ND	5A	59A	2,4-dinitrophenol	ND
1A	24A	2-chlorophenol	ND	4A	60A	2-methyl-4,6-dinitrophenol	ND
2A	31A	2,4-dichlorophenol	ND	9A	64A	pentachlorophenol	ND
3A	34A	2,4-dimethylphenol	ND	10A	390	phenol	3
6A	57A	2-nitrophenol	ND				

3 300

**SURROGATE RECOVERIES**

SCAN CODE	COMPOUND	RESULT
339	451	d5-phenol 130
225	452	2-fluorophenol 120
925	453	2,4,6-tribromophenol 156
454		d3-phenol

**NOTES AND DEFINITIONS FOR THIS REPORT**

SCAN = scan number or retention time on chromatogram  
All results reported in ug/l unless otherwise specified

**INTEGRITY  
CORPORATION**

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REPORT

Results by Sample

LAB # 86-02-116

Continued From Above

SAMPLE ID duplicate analysis 625

FRACTION 05B

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected not specified

Category

ND = not detected at EPA detection limit method 625, (Federal Register, 11/26/84).

BL = detected in reagent blank, background subtraction not performed.

J = estimated value, less than method detection limit.

CONC FACTOR indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc factor.

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REPORT

Results by Sample

LAB # 86-02-116

SAMPLE ID duplicate analysis 625

FRACTION 05B

TEST CODE M625 B NAME Method 625 Base/Neutrals

Date & Time Collected not specified

Category

DATA FILE		DATE EXTRACTED		DATE INJECTED		ANALYST		INSTRUMENT		NPDES SCAN		EPA		COMPOUND		VERIFIED BY LAK	
CONC FACTOR		1								5100		NJL		COMPOUNDS DETECTED		2	
NPDES	SCAN	EPA	COMPOUND	RESULT	NPDES	SCAN	EPA	COMPOUND	RESULT								
18	18		acenaphthene	ND	41B		61B	N-nitrosodimethylamine	ND								
48	58		benzidine	ND	43B	967	62B	N-nitrosodiphenylamine	2								
468	88		1,2,4-trichlorobenzene	ND	42B		63B	N-nitrosodi-n-propylamine	ND								
338	98		hexachlorobenzene	ND	13B		66B	bis(2-ethylhexyl)phthalate	ND								
368	128		hexachloroethane	ND	15B		67B	butyl benzyl phthalate	ND								
118	188		bis(2-chloroethyl)ether	ND	26B	1193	68B	di-butyl phthalate	2 BL								
168	208		2-chloronaphthalene	ND	29B		69B	di-n-octyl phthalate	ND								
208	258		1,2-dichlorobenzene	ND	24B		70B	diethyl phthalate	ND								
218	268		1,3-dichlorobenzene	ND	25B		71B	dimethyl phthalate	ND								
228	278		1,4-dichlorobenzene	ND	5B		72B	benzo(a)anthracene A	ND								
238	338		3,3'-dichlorobenzidine	ND	6B		73B	benzo(a)pyrene	ND								
278	358		2,4-dinitrotoluene	ND	7B		74B	benzo(b)fluoranthene *	ND								
388	368		2,6-dinitrotoluene	ND	9B		75B	benzo(k)fluoranthene *	ND								
398	378		1,2-diphenylhydrazine	ND	18B		76B	chrysene A	ND								
318	398		fluoranthene	ND	2B		77B	acenaphthylene	ND								
178	408		4-chlorophenyl phenyl ether	ND	30		78B	anthracene B	ND								



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REPORT

Results by Sample

LAB # 86-02-116

Continued From Above

SAMPLE ID duplicate analysis 625

FRACTION 05B

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected not specified

Category

14B	41B	4-bromophenyl phenyl ether	ND	8B	79B	benzo(ghi)perylene	ND
12B	42B	bis(2-chloroisopropyl)ether	ND	32B	80B	fluorene	ND
10B	43B	bis(2-chloroethoxy)methane	ND	44B	81B	phenanthrene B	ND
34B	52B	hexachlorobutadiene	ND	19B	82B	dibenzo(a,h)anthracene	ND
35B	53B	hexachlorocyclopentadiene	ND	37B	83B	indeno(1,2,3-cd)pyrene	ND
38B	54B	isophorone	ND	45B	84B	pyrene	ND
39B	55B	naphthalene	ND				
40B	56B	nitrobenzene	ND				

IMMOBILIZED RECOVERIES

SCAN CODE	RESULT
523 BS1	d5-nitrobenzene 148
765 BS2	2-fluorobiphenyl 143
1341 BS3	d14-terphenyl 162
BS4	d10-biphenyl

3 303

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram  
 All results reported in ug/l unless otherwise specified  
 ND = not detected at EPA detection limit method 625, (Federal Register, 10/26/84).  
 \* = benzo(b)fluoranthene and benzo(k)fluoranthene co-elute  
 A = benzo(a)anthracene and chrysene co-elute at high concentrations.

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Results by Sample

REPORT

LAB # 86-02-116

Continued From Above

SAMPLE ID duplicate analysis 625

FRACTION 05B

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected not specified

Category

B = anthracene and phenanthrene co-elute in high concentrations.  
 SL = detected in reagent blank; background subtraction not performed.  
 J = estimated value; less than method detection limit.  
 CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection  
 limits should be multiplied by conc. factor.

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Analytical Serv  
Results by Sample

LAB # 86-02-116

SAMPLE ID duplicate analysis 625

FRACTION 05B TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS  
Date & Time Collected not specified Category

DATA FILE 50002116005  
CONC. FACTOR

DATE EXTRACTED 02/20/86  
DATE INJECTED 03/07/86

ANALYST WJL

VERIFIED BY LAK  
COMPOUNDS DETECTED 0

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1P	86P	aldrin	ND	2P	102P	alpha BHC	ND
10P	90P	dieldrin	ND	3P	103P	beta BHC	ND
6P	91P	chlordane	ND	4P	104P	gamma BHC	ND
7P	92P	4,4'-DDT	ND	5P	105P	delta BHC	ND
8P	93P	4,4'-DDE	ND	18P	106P	PCB-1242	ND
9P	94P	4,4'-DDD	ND	19P	107P	PCB-1254	ND
11P	95P	alpha endosulfan	ND	20P	108P	PCB-1221	ND
12P	96P	beta endosulfan	ND	21P	109P	PCB-1232	ND
14P	97P	endosulfan sulfate	ND	22P	110P	PCB-1248	ND
14P	98P	endrin	ND	23P	111P	PCB-1260	ND
15P	99P	endrin aldehyde	ND	24P	112P	PCB-1016	ND
16P	100P	heptachlor	ND	25P	113P	toxaphene	ND
17P	101P	heptachlor epoxide	ND				

**INSTRUMENTAL  
CORPORATION**

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REPORT

Results by Sample

LAB # 86-02-116

Continued From Above

SAMPLE ID duplicate analysis 625

FRACTION 05B

TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS

Date & Time Collected not specified

Category

**NOTES AND DEFINITIONS FOR THIS REPORT:**

SCAN = scan number on chromatogram

All results reported in micrograms/liter unless otherwise specified.

ND = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).

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Analytical Serv

REPORT

LAB # 86-02-116

Results by Sample

SAMPLE ID matrix spike 625

FRACTION 05A

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected not specified

Category

DATA FILE 50M02116C05 DATE EXTRACTED 02/20/86 ANALYST WJL VERIFIED BY LAK  
CONC. FACTOR 1 DATE INJECTED 03/07/86 INSTRUMENT 5100 COMPOUNDS DETECTED 11

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT		
11A	<u>752</u>	21A	2, 4, 6-trichlorophenol	57	7A	<u>889</u>	58A	4-nitrophenol	<u>130</u>
8A	<u>698</u>	22A	4-chloro-3-methylphenol	60	5A	<u>875</u>	59A	2, 4-dinitrophenol	<u>54</u>
1A	<u>405</u>	24A	2-chlorophenol	74	4A	<u>961</u>	60A	2-methyl-4, 6-dinitrophenol	<u>110</u>
2A	<u>593</u>	31A	2, 4-dichlorophenol	54	9A	<u>1070</u>	64A	pentachlorophenol	<u>37</u>
3A	<u>558</u>	34A	2, 4-dimethylphenol	29	10A	<u>390</u>	65A	phenol	<u>67</u>
6A	<u>519</u>	57A	2-nitrophenol	78					

SURROGATE RECOVERIES

SCAN CODE	COMPOUND	RESULT
<u>238</u>	451	d5-phenol
		70
<u>234</u>	452	2-fluorophenol
		70
<u>925</u>	453	2,4,6-tribromophenol
		58
	454	d3-phenol

NOTES AND DEFINITIONS FOR THIS REPORT

SCAN = scan number or retention time on chromatogram  
All results reported in% Recov unless otherwise specified

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Results by Sample

REPORT

LAB # 86-02-116

Continued From Above

SAMPLE ID matrix spike 625

FRACTION 05A

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected not specified

Category

ND = not detected at EPA detection limit method 625, (Federal Register, 11/26/84).  
SL = detected in reagent blank; background subtraction not performed.  
J = estimated value; less than method detection limit.  
CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-116

SAMPLE ID matrix spike 625

FRACTION 05A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date &amp; Time Collected not specified

Category

DATA FILE SCH02116005

DATE EXTRACTED 02/20/86

DATE INJECTED 03/07/86

CONC. FACTOR 1

ANALYST

INSTRUMENT

VERIFIED BY LAK

COMPOUNDS DETECTED 43

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1B	869	13	acenaphthene	41B	163	61B	N-nitrosodimethylamine
4B	58	58	benzidine	43B	961	62B	N-nitrosodiphenylamine
46B	596	88	1,2,4-trichlorobenzene	42B	487	63B	N-nitrosodi-n-propylamine
33B	1043	98	hexachlorobenzene	13B	1519	66B	bis(2-ethylhexyl)phthalate
36B	495	128	hexachloroethane	15B	1423	67B	butyl benzyl phthalate
11B	398	188	bis(2-chloroethyl)ether	26B	1192	68B	di-butyl phthalate
16B	777	202	2-chloronaphthalene	29B	1613	69B	di-n-octyl phthalate
20B	453	258	1,2-dichlorobenzene	24B	941	70B	diethyl phthalate
21B	422	268	1,3-dichlorobenzene	25B	832	71B	dimethyl phthalate
22B	430	278	1,4-dichlorobenzene	5B	1500	72B	benzo(a)anthracene A
23B	1497	288	3,3'-dichlorobenzidine	6B	1720	73B	benzo(a)pyrene
27B	898	358	2,4-dinitrotoluene	7B	1668	74B	benzo(b)fluoranthene *
28B	810	368	2,6-dinitrotoluene	9B	1672	75B	benzo(k)fluoranthene *
29B	378	378	1,2-diphenylhydrazine	18B	1506	76B	chrysene A
31B	1277	392	fluoranthene	2B	840	77B	acenaphthylene
17B	548	408	4-chlorophenyl phenyl ether	3B	1097	78B	anthracene B

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-116

Continued From Above

SAMPLE ID matrix spike 625

FRACTION 05A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected not specified

Category

148	1022	41B	4--bromophenyl phenyl ether	120	8B	2019	79B	benzo(ghi)perylene	120
128	452	42B	bis(2-chloroisopropyl)ether	130	32B	946	80B	fluorene	110
108	571	43B	bis(2-chloroethoxy)methane	100	44B	1092	81B	phenanthrene B	100
34B	528		hexachlorobutadiene	ND	19B	1957	82B	dibenzo(a,h)anthracene	100
35B	741	53B	hexachlorocyclopentadiene	4	37B	1953	83B	indeno(1,2,3-cd)pyrene	110
38B	538	54B	isophorone	100	45B	1311	84B	pyrene	110
39B	604	55B	naphthalene	100					
40B	505	56B	nitrobenzene	110					

SURROGATE RECOVERIES

SCAN CODE	RESULT
502 851	d5-nitrobenzene 138
764 852	2-fluorobiphenyl 134
1232 853	d14-terphenyl 110
854	d10-biphenyl

3 310

NOTES AND DEFINITIONS FOR THIS REPORT

SCAN = scan number or retention time on chromatogram.  
 All results reported in % Recovery, unless otherwise specified.  
 ND = not detected at EPA detection limit method 625, (Federal Register, 10/26/84).  
 \* = benzo(b)fluoranthene and benzo(k)fluoranthene co-elute.  
 A = benzo(a)anthracene and chrysene co-elute at high concentrations.



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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-116

Continued From Above

SAMPLE ID matrix spike 625

FRACTION 05A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected not specified

Category

S = anthracene and phenanthrene co-elute in high concentrations.

BL = detected in reagent blank; background subtraction not performed.

J = estimated value, less than method detection limit.

CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

# CORPORATION

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-116

SAMPLE ID reagent blank 625

FRACTION 06A

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected not specified

Category

DATA FILE 20802116C05  
CONC FACTOR 1

DATE EXTRACTED 02/20/86  
DATE INJECTED 03/07/86

ANALYST WJL  
INSTRUMENT 5100

VERIFIED BY LAK  
COMPOUNDS DETECTED 0

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
11A	21A	2,4,6-trichlorophenol	ND	7A	58A	4-nitrophenol	ND
8A	22A	4-chloro-3-methylphenol	ND	5A	59A	2,4-dinitrophenol	ND
1A	24A	2-chlorophenol	ND	4A	60A	2-methyl-4,6-dinitrophenol	ND
2A	31A	2,4-dichlorophenol	ND	9A	64A	pentachlorophenol	ND
3A	34A	2,4-dimethylphenol	ND	10A	65A	phenol	ND
6A	57A	2-nitrophenol	ND				

## SURROGATE RECOVERIES

SCAN CODE	COMPOUND	RESULT
443	451	d5-phenol 71
326	452	2-fluorophenol 100
1066	453	2,4,6-tribromophenol 69
	454	d3-phenol

## NOTES AND DEFINITIONS FOR THIS REPORT

SCAN = scan number or retention time on chromatogram  
All results reported in ug/l unless otherwise specified.

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Analytical Serv

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Results by Sample

LAB # 86-02-116

Continued From Above

SAMPLE ID reagent blank 625

FRACTION 06A

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected not specified

Category

ND = not detected at EPA detection limit method 625, (Federal Register, 11/26/84).

BL = detected in reagent blank; background subtraction not performed.

U = estimated value; less than method detection limit.

CONC. FACTOR indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

# WATKINS CORPORATION

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-116

SAMPLE ID reagent blank 625

FRACTION 06A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected not specified

Category

DATA FILE	20802116C05	DATE EXTRACTED	02/20/86	ANALYST	W.J.L.	VERIFIED BY	LAK
CORC FACTOR	1	DATE INJECTED	03/07/86	INSTRUMENT	5100	COMPOUNDS DETECTED	2
NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1B	1B	acenaphthene	ND	41B	61B	N-nitrosodimethylamine	ND
4B	5B	benzidine	ND	43B	62B	N-nitrosodiphenylamine	ND
46B	8B	1,2,4-trichlorobenzene	ND	42B	63B	N-nitrosodi-n-propylamine	ND
32B	9B	hexachlorobenzene	ND	13B	1615	bis(2-ethylhexyl)phthalate	B
36B	12B	hexachloroethane	ND	15B	67B	butyl benzyl phthalate	ND
11B	18B	bis(2-chloroethyl)ether	ND	26B	127B	di-butyl phthalate	3
16B	20B	2-chloronaphthalene	ND	29B	69B	di-n-octyl phthalate	ND
20B	25B	1,2-dichlorobenzene	ND	24B	70B	diethyl phthalate	ND
21B	26B	1,3-dichlorobenzene	ND	25B	71B	dimethyl phthalate	ND
22B	27B	1,4-dichlorobenzene	ND	5B	72B	benzo(a)anthracene A	ND
23B	28B	3,3'-dichlorobenzidine	ND	6B	73B	benzo(a)pyrene	ND
27B	35B	2,4-dinitrotoluene	ND	7B	74B	benzo(b)fluoranthene *	ND
28B	36B	2,6-dinitrotoluene	ND	9B	75B	benzo(k)fluoranthene *	ND
29B	37B	1,2-diphenylhydrazine	ND	18B	76B	chrysene A	ND
31B	39B	fluoranthene	ND	20B	77B	acenaphthylene	ND
17B	40B	4-chlorophenyl phenyl ether	ND	28B	78B	anthracene B	ND

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-116

Continued From Above

SAMPLE ID reagent blank 625

FRACTION 06A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected not specified

Category

148	413	4-bromophenyl phenyl ether	ND	8B	79B	benzo(ghi)perylene	ND
128	42B	bis(2-chloroisopropyl)ether	ND	32B	80B	fluorene	ND
108	43B	bis(2-chloroethoxy)methane	ND	44B	81B	phenanthrene B	ND
348	52B	hexachlorobutadiene	ND	19B	82B	dibenzo(a,h)anthracene	ND
358	53B	hexachlorocyclopentadiene	ND	37B	83B	indeno(1,2,3-cd)pyrene	ND
388	54B	isophorone	ND	45B	84B	pyrene	ND
398	55B	naphthalene	ND				
408	56B	nitrobenzene	ND				

**SURROGATE RECOVERIES**

SCAN CODE	RESULT
3 315	
555 BS1	d5-nitrobenzene 118
838 BS2	2-fluorobiphenyl 96
1432 BS3	d14-terphenyl 118
BS4	d10-biphenyl

**NOTES AND DEFINITIONS FOR THIS REPORT**

SCAN = scan number or retention time on chromatogram.  
 All results reported in ug/l unless otherwise specified.  
 ND = not detected at EPA detection limit method 625, (Federal Register, 10/26/84).  
 + = benzo(b)fluoranthene and benzo(k)fluoranthene co-elute  
 A = benzo(a)anthracene and chrysene co-elute at high concentrations.

**MAXAM CORPORATION**

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-116

Continued From Above

SAMPLE ID reagent blank 625

FRACTION 06A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected not specified

Category

B = anthracene and phenanthrene co-elute in high concentrations

EL = detected in reagent blank, background subtraction not performed.

U = estimated value, less than method detection limit

CONC FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-116

SAMPLE ID reagent blank 625

FRACTION 06A

TEST CODE MS 608

NAME Pesticides & PCBs by GC/MS

Date & time Collected not specified

Category

DATA FILE 20802116005

DATE EXTRACTED 02/20/86

ANALYST WJL

VERIFIED BY LAK

CONC. FACTOR

DATE INJECTED 03/07/86

COMPOUNDS DETECTED 0

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1P	89P	aldrin	ND	2P	102P	alpha BHC	ND
10P	90P	dieldrin	ND	3P	103P	beta BHC	ND
6P	91P	chlordane	ND	4P	104P	gamma BHC	ND
7P	92P	4,4'-DDT	ND	5P	105P	delta BHC	ND
8P	93P	4,4'-DDE	ND	18P	106P	PCB-1242	ND
9P	94P	4,4'-DDD	ND	19P	107P	PCB-1254	ND
11P	95P	alpha endosulfan	ND	20P	108P	PCB-1221	ND
12P	96P	beta endosulfan	ND	21P	109P	PCB-1232	ND
14P	97P	endosulfan sulfate	ND	22P	110P	PCB-1248	ND
14P	98P	endrin	ND	23P	111P	PCB-1260	ND
15P	99P	endrin aldehyde	ND	24P	112P	PCB-1016	ND
16P	100P	heptachlor	ND	25P	113P	toxaphene	ND
17P	101P	heptachlor epoxide	ND				

**MACAMILLAN  
CORPORATION**

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-116

Continued From Above

SAMPLE ID reagent blank 625

FRACTION 06A

TEST CODE MS 608

NAME Pesticides & PCBs by GC/MS

Date & Time Collected not specified

Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN# = scan number on chromatogram.

All results reported in micrograms/liter unless otherwise specified.

ND = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).



INFORMATION  
CORPORATION

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Analytical Serv

REPORT

LAB # 85-02-116

NonReported Work

FRACTION AND TEST CODES FOR WORK NOT REPORTED ELSEWHERE

01B : DUP\_NS  
02B : DUP\_NS  
03B : DUP\_NS  
04B : DUP\_NS

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Analytical Serv

REPORT

LAB # 86-02-120

04/01/86 17:33:52

REPORT Radian

TO BL 4

Austin

ATTEN Larry French

CLIENT PLANT 4

COMPANY Plant 4

FACILITY Carswell AFB (Gen. Dynamics)

SAMPLES 6

WORK ID groundwater

TAKEN FS, WJ

TRANS Fed Ex

TYPE

P O # 212-027-27-40

INVOICE under separate cover

PREPARED Radian Analytical Services

BY 8501 MoPac Blvd

P O Box 9948

Austin, Texas 78765

ATTEN

PHONE (512) 454-4797

CERTIFIED BY

CONTACT CONOVER

Second column confirmation performed for EPA 601: -02, -04, -05, for EPA 602: -01, -02

Footnotes and Comments

\* Indicates a value less than 5 times the detection limit. Potential error for such low values ranges between 50 and 100%.

@ Indicates that spike recovery for this analysis on the specific matrix was not within acceptable limits indicating an interferent present.

SAMPLE IDENTIFICATION

Analytical Serv TEST CODES and NAMES used on this report

01	860175
02	860176
03	860178
04	860179
05	860180
06	860177

AG E	Silver, ICPEs
AS CA	Arsenic, low level
BA E	Barium, ICPEs
CD E	Cadmium, ICPEs
CR E	Chromium, ICPEs
DG3020	Digestion by Method 3020
DG6010	Digestion by Method 6010
GC 501	EPA Method 501/GC
GC 502	EPA Method 602/GC
HC IR	Hydrocarbons
HC CA	Mercury, Cold Vapor
INO IR	Oil and Grease, Infrared
PB CA	Lead, low level
SF CA	Selenium, low level

# KADIAN CORPORATION

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Analytical Serv

REPORT

LAB # 86-02-120

RESULTS BY TEST

TEST CODE	Sample 01 (entered units)	Sample 02 (entered units)	Sample 03 (entered units)	Sample 04 (entered units)	Sample 05 (entered units)
AG_E ug/ml	0.002*	0.013	0.006*	0.010*	0.011
AS_GA ug/ml	<.003	<.003	<.003	<.003	0.062
BA_E ug/ml	0.089	0.090	0.11	0.092	0.082
CD_E ug/ml	<.002	<.002	<.002	<.002	<.002
CR_E ug/ml	0.012*	0.024*	0.021*	0.075	0.064
DC3020 date complete	03/06/86	03/06/86	03/06/86	03/06/86	03/06/86
DC6010 date complete	02/28/86	02/28/86	02/28/86	02/28/86	02/28/86
HC_IR mg/L	<.0002	<.0002	<.0002	<1	<1
HG_CA ug/ml	<.0002	<.0002	<.0002	<.0002	<.0002
ONG_IR mg/L	<.001	0.027	0.031	1*	<1
PB_GA ug/ml	<.003e	<.003	<.003	0.040	0.068
SE_GA ug/ml	<.003e	<.003	<.003	<.003	<.003

**KANUPHAN  
CORPORATION**

LAB # 86-02-120

REPORT

Analytical Serv

RESULTS BY TEST

PAGE 3

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TEST CODE	Sample 06
default units	(entered units)
HC_IR	<1
mg/L	

# RADIAN CORPORATION

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-120

SAMPLE ID 860175

FRACTION 01A

TEST CODE GC 601

NAME EPA Method 601/GC

Date & Time Collected 02/19/86

Category

DATA FILE \_\_\_\_\_  
CONC. FACTOR \_\_\_\_\_

DATE INJECTED 02/21/86

ANALYST \_\_\_\_\_  
INSTRUMENT \_\_\_\_\_

VERIFIED BY MCL \_\_\_\_\_  
COMPOUNDS DETECTED \_\_\_\_\_

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
_____	Chloromethane	ND	_____	Trichloroethene	ND
_____	Bromomethane	ND	_____	Dibromochloromethane *	ND
_____	Vinyl Chloride	ND	_____	1,1,2-Trichloroethane *	ND
_____	Chloroethane	ND	_____	cis-1,3-Dichloropropene *	ND
_____	Methylene Chloride	ND	_____	2-Chloroethylvinyl Ether	ND
_____	Trichlorofluoromethane	ND	_____	Bromoform	ND
_____	1,1-Dichloroethene	ND	_____	1,1,2,2-Tetrachloroethane #	ND
_____	1,1-Dichloroethane	ND	_____	Tetrachloroethylene #	ND
_____	trans-1,2-Dichloroethene	ND	_____	Chlorobenzene	ND
_____	Chloroform	ND	_____	1,3-Dichlorobenzene	ND
_____	1,2-Dichloroethane	ND	_____	1,2-Dichlorobenzene	ND
_____	1,1,1-Trichloroethane	ND	_____	1,4-Dichlorobenzene	ND
_____	Carbon Tetrachloride	ND			
_____	Bromodichloromethane	ND			
_____	1,2-Dichloropropane	ND			
_____	trans-1,3-Dichloropropene	ND			

**KADIAN  
CORPORATION**

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-120

Continued From Above

SAMPLE ID 860175

FRACTION 01A

TEST CODE GC 601

NAME EPA Method 601/GC

Date & Time Collected 02/19/86

Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

All results reported in ug/L unless otherwise specified.

ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79).

\*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.

#1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

# KADIAN CORPORATION

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Analytical Serv REPORT

RECEIVED: 02/20/86

Results by Sample

SAMPLE ID 860175

FRACTION 01C TEST CODE GC 602 NAME EPA Method 602/GC

Date & Time Collected 02/19/86

Category

DATA FILE \_\_\_\_\_ DATE INJECTED 02/21/86

CONC. FACTOR \_\_\_\_\_ ANALYST \_\_\_\_\_ MCL \_\_\_\_\_ VERIFIED BY MCL \_\_\_\_\_  
1 1 d 1 COMPOUNDS DETECTED 1

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
	Benzene	ND		1,4-Dichlorobenzene	ND
1	Toluene	10.0		1,3-Dichlorobenzene	ND
	Ethyl Benzene	ND		1,2-Dichlorobenzene	ND
	Chlorobenzene	ND			

3 325

## NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

All results reported in ug/L unless otherwise specified.

ND = not detected at EPA detection limit method 602, (Federal Register, 12/3/79).

# KADIAN CORPORATION

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Analytical Serv

REPORT

LAB # 86-02-120

RECEIVED: 02/20/86

Results by Sample

SAMPLE ID 860176

FRACTION 02A

TEST CODE GC 601 NAME EPA Method 601/GC

Date & Time Collected 02/19/86

Category

DATA FILE \_\_\_\_\_ C \_\_\_\_\_ DATE INJECTED 02/21/86

ANALYST \_\_\_\_\_ MCL \_\_\_\_\_ VERIFIED BY MCL \_\_\_\_\_  
INSTRUMENT \_\_\_\_\_ 9 \_\_\_\_\_ COMPOUNDS DETECTED 5

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
1	Chloromethane	ND	4	Trichloroethene	7.01
	Bromomethane	ND		Dibromochloromethane *	ND
	Vinyl Chloride	ND		1,1,2-Trichloroethane *	ND
	Chloroethane	ND		cis-1,3-Dichloropropene *	ND
	Methylene Chloride	2.54		2-Chloroethylvinyl Ether	ND
	Trichlorofluoromethane	ND		Bromoform	ND
	1,1-Dichloroethene	ND		1,1,2,2-Tetrachloroethane #	ND
	1,1-Dichloroethane	ND	5	Tetrachloroethylene #	0.98
	trans-1,2-Dichloroethene	ND		Chlorobenzene	ND
2	Chloroform	36.6		1,3-Dichlorobenzene	ND
	1,2-Dichloroethane	ND		1,2-Dichlorobenzene	ND
	1,1,1-Trichloroethane	ND		1,4-Dichlorobenzene	ND
	Carbon Tetrachloride	ND			
	Bromodichloromethane	ND			
3	1,2-Dichloropropene	9.64			
	trans-1,3-Dichloropropene	ND			



**RADIAN  
CORPORATION**

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-120

Continued From Above

SAMPLE ID 860176

FRACTION 02A TEST CODE GC 601

NAME EPA Method 601/GC

Date & Time Collected 02/19/86

Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

All results reported in ug/L unless otherwise specified.

ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79).

\*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.

#1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

# RADIAN CORPORATION

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Analytical Serv  
Results by Sample

LAB # 86-02-120

SAMPLE ID 860176

FRACTION 02C

TEST CODE GC 602

NAME EPA Method 602/GC

Date & Time Collected 02/19/86

Category

DATA FILE \_\_\_\_\_ D \_\_\_\_\_ DATE INJECTED 02/25/86 ANALYST \_\_\_\_\_ RP \_\_\_\_\_ VERIFIED BY MCL  
CONC. FACTOR 1 INSTRUMENT d COMPOUNDS DETECTED 1

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
	Benzene	ND		1,4-Dichlorobenzene	ND
3 328	Toluene	22.5		1,3-Dichlorobenzene	ND
	Ethyl Benzene	ND		1,2-Dichlorobenzene	ND
	Chlorobenzene	ND			

## NOTES AND DEFINITIONS FOR THIS REPORT

SCAN = scan number or retention time on chromatogram.  
All results reported in ug/l unless otherwise specified.  
ND = not detected at EPA detection limit method 602, (Federal Register, 12/3/79).

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Analytical Serv  
Results by Sample

LAB # 86-02-120

SAMPLE ID 860178

FRACTION 03A

TEST CODE GC 601

NAME EPA Method 601/GC

Date & Time Collected 02/19/86

Category

DATA FILE \_\_\_\_\_ G DATE INJECTED 02/21/86  
CONC. FACTOR \_\_\_\_\_ 1

ANALYST \_\_\_\_\_ MCL \_\_\_\_\_  
INSTRUMENT \_\_\_\_\_ g COMPOUNDS DETECTED 1

VERIFIED BY MCL

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
_____	Chloromethane	ND	_____	Trichloroethene	ND
_____	Bromomethane	ND	_____	Dibromochloromethane *	ND
_____	Vinyl Chloride	ND	_____	1,1,2-Trichloroethane *	ND
_____	Chloroethane	ND	_____	cis-1,3-Dichloropropene *	ND
_____	Methylene Chloride	ND	_____	2-Chloroethylvinyl Ether	ND
_____	Trichlorofluoromethane	ND	_____	Bromoform	ND
_____	1,1-Dichloroethene	ND	_____	1,1,2,2-Tetrachloroethane #	ND
_____	1,1-Dichloroethane	ND	_____	Tetrachloroethylene #	ND
_____	trans-1,2-Dichloroethene	ND	_____	Chlorobenzene	ND
1	Chloroform	0.46	_____	1,3-Dichlorobenzene	ND
_____	1,2-Dichloroethane	ND	_____	1,2-Dichlorobenzene	ND
_____	1,1,1-Trichloroethane	ND	_____	1,4-Dichlorobenzene	ND
_____	Carbon tetrachloride	ND			
_____	Bromodichloromethane	ND			
_____	1,2-Dichloropropene	ND			
_____	trans-1,3-Dichloropropene	ND			

**RADIAN**  
CORPORATION

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-120

Continued From Above

SAMPLE ID 860178

FRACTION 03A TEST CODE GC 601

NAME EPA Method 601/GC

Date & Time Collected 02/19/86

Category

NOTES AND DEFINITIONS FOR THIS REPORT

SCAN = scan number or retention time on chromatogram.

All results reported in ug/L unless otherwise specified.

ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79).

\*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.

#1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

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Analytical Serv  
Results by Sample

LAB # 86-02-120

REPORT

SAMPLE ID 860178

FRACTION 03C TEST CODE GC 602 NAME EPA Method 602/GC  
Date & Time Collected 02/19/86 Category

DATA FILE D DATE INJECTED 02/25/86 ANALYST RP VERIFIED BY MCL  
CONC. FACTOR 1 INSTRUMENT d COMPOUNDS DETECTED 1

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
	Benzene	ND		1,4-Dichlorobenzene	ND
1	Toluene	2.01		1,3-Dichlorobenzene	ND
	Ethyl Benzene	ND		1,2-Dichlorobenzene	ND
	Chlorobenzene	ND			

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NOTES AND DEFINITIONS FOR THIS REPORT

SCAN = scan number or retention time on chromatogram.

All results reported in ug/L, unless otherwise specified.

ND - not detected at EPA detection limit method 602, (Federal Register, 12/3/79)

# RADIAN CORPORATION

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Results by Sample

REPORT

LAB # 86-02-120

SAMPLE ID 860179

FRACTION 04A

TEST CODE GC 601

NAME EPA Method 601/GC

Date & Time Collected 02/19/86

Category

DATA FILE	CONC	FACTOR	DATE INJECTED	ANALYST	INSTRUMENT	MCL	COMPOUNDS DETECTED	VERIFIED BY
			02/24/86			9	1	MCL
SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT			
	Chloromethane	ND	1	Trichloroethene	10.982			
	Bromomethane	ND		Dibromochloromethane *	ND			
	Vinyl Chloride	ND		1,1,2-Trichloroethane *	ND			
	Chloroethane	ND		cis-1,3-Dichloropropene *	ND			
	Methylene Chloride	ND		2-Chloroethylvinyl Ether	ND			
	Trichlorofluoromethane	ND		Bromoform	ND			
	1,1-Dichloroethene	ND		1,1,2,2-Tetrachloroethane #	ND			
	1,1-Dichloroethane	ND		Tetrachloroethylene #	ND			
	trans-1,2-Dichloroethene	ND		Chlorobenzene	ND			
	Chloroform	ND		1,3-Dichlorobenzene	ND			
	1,2-Dichloroethane	ND		1,2-Dichlorobenzene	ND			
	1,1,1-Trichloroethane	ND		1,4-Dichlorobenzene	ND			
	Carbon Tetrachloride	ND						
	Bromodichloromethane	ND						
	1,2-Dichloropropane	ND						
	trans-1,3-Dichloropropene	ND						

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**RADIAN**  
CORPORATION

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SAMPLE ID 860179

Analytical Serv  
Results by Sample

REPORT  
LAB # 86-02-120  
Continued From Above

FRACTION 04A TEST CODE GC 601 NAME EPA Method 601/GC  
Date & Time Collected 02/19/86 Category

NOTES AND DEFINITIONS FOR THIS REPORT:

SCAN = scan number or retention time on chromatogram.  
All results reported in ug/L unless otherwise specified.  
ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79).  
\*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.  
#1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

# RADIAN CORPORATION

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REPORT

Results by Sample

LAB # 86-02-120

SAMPLE ID 860179

FRACTION 04C

TEST CODE GC 602 NAME EPA Method 602/GC

Date & Time Collected 02/19/86

Category

DATA FILE \_\_\_\_\_  
CONC. FACTOR 1000

DATE INJECTED 02/25/86

ANALYST \_\_\_\_\_  
INSTRUMENT \_\_\_\_\_

VERIFIED BY MCL  
COMPOUNDS DETECTED 0

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
_____	Benzene	ND	_____	1,4-Dichlorobenzene	ND
_____	Toluene	ND	_____	1,3-Dichlorobenzene	ND
_____	Ethyl Benzene	ND	_____	1,2-Dichlorobenzene	ND
_____	Chlorobenzene	ND	_____		

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## NOTES AND DEFINITIONS FOR THIS REPORT

SCAN = scan number or retention time on chromatogram.  
All results reported in \_\_\_\_\_ ug/l. unless otherwise specified.  
ND = not detected at EPA detection limit method 602, (Federal Register, 12/3/79)



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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-120

SAMPLE ID 860180

FRACTION 05A

TEST CODE GC 601

NAME EPA Method 601/GC

Date &amp; Time Collected 02/19/86

Category

DATA FILE \_\_\_\_\_ G DATE INJECTED 02/24/86

CONC. FACTOR 1000

ANALYST \_\_\_\_\_  
INSTRUMENT \_\_\_\_\_MCL \_\_\_\_\_  
COMPOUNDS DETECTED 1

VERIFIED BY MCL

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
---	Chloromethane	ND	1	Trichloroethene	10.866
---	Bromomethane	ND	---	Dibromochloromethane *	ND
---	Vinyl Chloride	ND	---	1,1,2-Trichloroethane *	ND
---	Chloroethane	ND	---	cis-1,3-Dichloropropene *	ND
---	Methylene Chloride	ND	---	2-Chloroethylvinyl Ether	ND
---	Trichlorofluoromethane	ND	---	Bromoform	ND
---	1,1-Dichloroethene	ND	---	1,1,2,2-Tetrachloroethane #	ND
---	1,1-Dichloroethane	ND	---	Tetrachloroethylene #	ND
---	trans-1,2-Dichloroethene	ND	---	Chlorobenzene	ND
---	Chloroform	ND	---	1,3-Dichlorobenzene	ND
---	1,2-Dichloroethane	ND	---	1,2-Dichlorobenzene	ND
---	1,1,1-Trichloroethane	ND	---	1,4-Dichlorobenzene	ND
---	Carbon Tetrachloride	ND			
---	Bromodichloromethane	ND			
---	1,2-Dichloropropane	ND			
---	trans-1,3-Dichloropropene	ND			

**KADIAN  
CORPORATION**

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Analytical Serv  
Results by Sample

LAB # 86-02-120  
Continued From Above

SAMPLE ID 860180

FRACTION 05A TEST CODE GC 601  
Date & Time Collected 02/19/86

NAME EPA Method 601/GC  
Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.  
All results reported in ug/L unless otherwise specified.  
ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79).  
\*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.  
#1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

# **KALDIAN** CORPORATION

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Results by Sample

LAB # 86-02-120

SAMPLE ID 860180  
FRACTION 05C  
TEST CODE GC 602  
NAME EPA Method 602/GC  
Date & Time Collected 02/19/86  
Category

DATA FILE \_\_\_\_\_ D \_\_\_\_\_  
CONC. FACTOR 1000  
DATE INJECTED 02/25/86  
ANALYST \_\_\_\_\_ RP \_\_\_\_\_  
INSTRUMENT \_\_\_\_\_  
VERIFIED BY MCL  
COMPOUNDS DETECTED 0

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
—	Benzene	ND ;	—	1,4-Dichlorobenzene	ND
—	Toluene	ND ;	—	1,3-Dichlorobenzene	ND
—	Ethyl Benzene	ND ;	—	1,2-Dichlorobenzene	ND
—	Chlorobenzene	ND ;	—		

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NOTES AND DEFINITIONS FOR THIS REPORT.  
SCAN = scan number or retention time on chromatogram.  
All results reported in ug/L unless otherwise specified.  
ND = not detected at EPA detection limit method 602, (Federal Register, 12/3/79).

# RADIAN CORPORATION

LAB # 86-02-120

REPORT

Analytical Serv

NonReported Work

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FRACTION AND TEST CODES FOR WORK NOT REPORTED ELSEWHERE

01B	:	DUP601	01D	:	DUP602
02B	:	DUP601	02D	:	DUP602
03B	:	DUP601	03D	:	DUP602
04B	:	DUP601	04D	:	DUP602
05B	:	DUP601	05D	:	DUP602
			04F	:	DUP_NS

# CORPORATION

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Analytical Serv

03/16/86 14:13:00

LAB # 86-02-122

REPORT Radian Corporation  
TO Larry French  
Austin, Texas

PREPARED Radian Analytical Services  
BY 8501 MoPac Blvd  
P.O. Box 9748  
Austin, Texas 78766

ATTEN

ATTEN  
PHONE (512) 454-4797

CLIENT PLANT 4 SAMPLES 4  
COMPANY General Dynamics  
FACILITY DEHL Plant 4, Bldg 4  
Austin, Texas

WORK ID Plant 4 Fort Worth Texas  
TAKEN 2/19/86 by Snyder  
TRANS Fed Ex 764773310  
TYPE H2O  
P O # 212-027-27-40  
INVOICE under separate cover

## Footnotes and Comments

\* Indicates a value less than 5 times the detection limit.  
Potential error for such low values ranges between  
50 and 100%.

@ Indicates that spike recovery for this analysis on the  
specific matrix was not within acceptable limits indicating  
an interferent present

## SAMPLE IDENTIFICATION

01 860178 H2O  
02 860175 H2O  
03 860175 H2O  
04 Reagent Blank 625

## Analytical Serv TEST CODES and NAMES used on this report

EX 625 Extraction only - 625 BN/A  
M625 A Method 625 Acid Compounds  
M625 B Method 625 Base/Neutrals  
MS 608 Pesticides & PCBs by GC/MS

*Lucas A. French*  
CERTIFIED BY

CONTACT FRENCH

**INSTRUMENTATION  
CORPORATION**

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Analytical Serv  
RESULTS BY TEST  
REPORT  
LAB # 86-02-122

TEST CODE	Sample 01 (entered units)	Sample 02 (entered units)	Sample 03 (entered units)	Sample 04 (entered units)
EX 625	02/20/86	02/20/86	02/20/86	02/20/86
date complete				

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-122

SAMPLE ID 860178 H2O

FRACTION 01A

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected 02/19/86

Category

DATA FILE 90092122C01  
CONC. FACTOR 1

DATE EXTRACTED 02/20/86  
DATE INJECTED 03/05/86

ANALYST  
INSTRUMENT

MM  
5100  
COMPOUNDS DETECTED 0

VERIFIED BY LAK

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
11A	21A	2,4,6-trichlorophenol	ND	7A	58A	4-nitrophenol	ND
8A	22A	4-chloro-3-methylphenol	ND	5A	59A	2,4-dinitrophenol	ND
1A	24A	2-chlorophenol	ND	4A	60A	2-methyl-4,6-dinitrophenol	ND
2A	31A	2,4-dichlorophenol	ND	9A	64A	pentachlorophenol	ND
3A	34A	2,4-dimethylphenol	ND	10A	65A	phenol	ND
4A	57A	2-nitrophenol	ND				

SURROGATE RECOVERIES

SCAN CODE	COMPOUND	RESULT
573 AS1	d5-phenol	53%
573 AS2	2-fluorophenol	56%
577 AS3	2,4,6-tribromophenol	80%
AS4	d3-phenol	

NOTES AND DEFINITIONS FOR THIS REPORT

SCAN = scan number or retention time on chromatogram

All results reported in ug/l unless otherwise specified

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-122

Continued From Above

SAMPLE ID B50178 H2U

FRACTION 01A

TEST CODE M525 A

NAME Method 625 Acid Compounds

Date & Time Collected 02/19/86

Category

ND = not detected at EPA detection limit method 625, (Federal Register, 11/26/84).  
 DL = detected in reagent blank; background subtraction not performed  
 U = estimated value, less than method detection limit  
 CONC. FACTOR indicates dilution of sample if greater than one (1). Minimum detection  
 limits should be multiplied by conc. factor.



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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-122

SAMPLE ID 860178 H2O

FRACTION 01A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/19/86

Category

DATA FILE 8602122001  
CONC FACTOR 1

DATE EXTRACTED 02/20/86  
DATE INJECTED 03/05/86

ANALYST  
INSTRUMENT 5100

VERIFIED BY LAK  
COMPOUNDS DETECTED 2

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1B	1B	acenaphthene	ND	41B	61B	N-nitrosodimethylamine	ND
4B	5B	benzidine	ND	43B	62B	N-nitrosodiphenylamine	ND
46B	8B	1,2,4-trichlorobenzene	ND	42B	63B	N-nitrosodi-n-propylamine	ND
30B	9B	hexachlorobenzene	ND	13B	1532	bis(2-ethylhexyl)phthalate	2
36B	12B	hexachloroethane	ND	15B	67B	butyl benzyl phthalate	ND
11B	18B	bis(2-chloroethyl)ether	ND	26B	1203	di-butyl phthalate	1 BL
16B	20B	2-chloronaphthalene	ND	29B	69B	di-n-octyl phthalate	ND
20B	25B	1,2-dichlorobenzene	ND	24B	70B	diethyl phthalate	ND
21B	26B	1,3-dichlorobenzene	ND	25B	71B	dimethyl phthalate	ND
22B	27B	1,4-dichlorobenzene	ND	5B	72B	benzo(a)anthracene A	ND
23B	28B	3,3'-dichlorobenzidine	ND	6B	73B	benzo(a)pyrene	ND
27B	35B	2,4-dinitrotoluene	ND	7C	74B	benzo(b)fluoranthene *	ND
28B	36B	2,6-dinitrotoluene	ND	9B	75B	benzo(k)fluoranthene *	ND
29B	37B	1,2-diphenylhydrazine	ND	18B	76B	chrysene A	ND
31B	39B	fluoranthene	ND	2B	77B	acenaphthylene	ND
17B	40B	4-chlorophenyl phenyl ether	ND	3B	78B	anthracene B	ND

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-122

Continued From Above

SAMPLE ID 860178 H20

FRACTION 01A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/19/86

Category

14B	41B	4-bromophenyl phenyl ether	ND	8B	79B	benzo(ghi)perylene	ND
12B	42B	bis(2-chloroisopropyl)ether	ND	32B	80B	fluorene	ND
10B	43B	bis(2-chloroethoxy)methane	ND	44B	81B	phenanthrene B	ND
34B	52B	hexachlorobutadiene	ND	19B	82B	dibenzo(a,h)anthracene	ND
35B	53B	hexachlorocyclopentadiene	ND	37B	83B	indeno(1,2,3-cd)pyrene	ND
38B	54B	isophorone	ND	45B	84B	pyrene	ND
39B	55B	naphthalene	ND				
40B	56B	nitrobenzene	ND				

SURROGATE RECOVERIES

SCAN CODE	RESULT
513 BS1	d5-nitrobenzene 50%
776 BS2	2-fluorobiphenyl 52%
1352 BS3	d14-terphenyl 78%
BS4	d10-biphenyl

NOTES AND DEFINITIONS FOR THIS REPORT

SCAN# = scan number or retention time on chromatogram  
 All results reported in ug/l unless otherwise specified.  
 ND = not detected at EPA detection limit method 625, (Federal Register, 10/26/84).  
 + = benzo(b)fluoranthene and benzo(k)fluoranthene co-elute.  
 A = benzo(a)anthracene and chrysene co-elute at high concentrations.

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-122

Continued From Above

SAMPLE ID 850178 H2O

FRACTION 01A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/19/86

Category

B = anthracene and phenanthrene co-elute in high concentrations.  
 SL = detected in reagent blank; background subtraction not performed.  
 J = estimated value; less than method detection limit.  
 CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection  
 limits should be multiplied by conc. factor.

LAB # 86-02-122

REPORT

Analytical Serv

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Results by Sample

SAMPLE ID 860178 H2O

FRACTION 01A

TEST CODE MS 608

NAME Pesticides & PCBs by GC/MS

Date & Time Collected 02/19/86

Category

DATA FILE 50002122001  
CONC. FACTOR

DATE EXTRACTED 02/20/86  
DATE INJECTED 03/05/86

ANALYST

MM

VERIFIED BY LAK  
COMPOUNDS DETECTED 0

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1P	89P	aldrin	ND	2P	102P	alpha BHC	ND
10P	90P	dieldrin	ND	3P	103P	beta BHC	ND
6P	91P	chlordane	ND	4P	104P	gamma BHC	ND
7P	92P	4,4'-DDT	ND	5P	105P	delta BHC	ND
8P	93P	4,4'-DDE	ND	18P	106P	PCB-1242	ND
9P	94P	4,4'-DDD	ND	19P	107P	PCB-1254	ND
11P	95P	alpha endosulfan	ND	20P	108P	PCB-1221	ND
12P	96P	beta endosulfan	ND	21P	109P	PCB-1232	ND
14P	97P	endosulfan sulfate	ND	22P	110P	PCB-1248	ND
14P	98P	endrin	ND	23P	111P	PCB-1260	ND
15P	99P	endrin aldehyde	ND	24P	112P	PCB-1016	ND
16P	100P	heptachlor	ND	25P	113P	toxaphene	ND
17P	101P	heptachlor epoxide	ND				

**WILSON-MANLEY  
CORPORATION**

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REPURI

LAB # 86-02-122

Results by Sample

Continued From Above

SAMPLE ID 850178 H20

FRACTION 01A

TEST CODE MS 608

NAME Pesticides & PCBs by GC/MS

Date & Time Collected 02/19/86

Category

**NOTES AND DEFINITIONS FOR THIS REPORT**

SCAN = scan number on chromatogram.

All results reported in micrograms/liter unless otherwise specified.

ND = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).

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REPORT

LAB # 86-02-122

Results by Sample

SAMPLE ID 860175 H2O

FRACTION 02A

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected 02/19/86

Category

DATA FILE 12002122002 DATE EXTRACTED 02/20/86 ANALYST HJL VERIFIED BY LAK  
CORE FACTOR 1 DATE INJECTED 03/06/86 INSTRUMENT 5100 COMPOUNDS DETECTED 1

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
11A	21A	2,4,6-trichlorophenol	ND	7A	58A	4-nitrophenol	ND
2A	22A	4-chloro-3-methylphenol	ND	5A	59A	2,4-dinitrophenol	ND
1A	24A	2-chlorophenol	ND	4A	60A	2-methyl-4,6-dinitrophenol	ND
2A	31A	2,4-dichlorophenol	ND	9A	64A	pentachlorophenol	ND
3A	34A	2,4-dimethylphenol	ND	10A	400	phenol	2
6A	57A	2-nitrophenol	ND				

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**SURROGATE RECOVERIES**

SCAN CODE	COMPOUND	RESULT
32B AS1	d5-phenol	67%
324 AS2	2-fluorophenol	65%
526 AS3	2,4,6-tribromophenol	93%
AS4	d3-phenol	

**NOTES AND DEFINITIONS FOR THIS REPORT:**

SCAN = scan number or retention time on chromatogram  
All results reported in ug/l unless otherwise specified

**LABORATORY CORPORATION**

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-122

Continued From Above

SAMPLE ID 860175 H20

FRACTION 02A

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected 02/19/86

Category

ND = not detected at EPA detection limit method 625, (Federal Register, 11/26/84).

SL = detected in reagent blank; background subtraction not performed.

J = estimated value; less than method detection limit.

CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

# CORPORATION

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-122

SAMPLE ID 850175 HED

FRACTION 02A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/19/86

Category

DATA FILE SC002122002

DATE EXTRACTED 02/20/86

ANALYST

WJL

VERIFIED BY LAK

CONC. FACTOR 1

DATE INJECTED 03/06/86

INSTRUMENT

5100

COMPOUNDS DETECTED 1

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
18	18	acenaphthene	ND	41B	61B	N-nitrosodimethylamine	ND
48	58	benzidine	ND	43B	62B	N-nitrosodiphenylamine	ND
468	88	1,2,4-trichlorobenzene	ND	42B	63B	N-nitrosodi-n-propylamine	ND
338	9B	hexachlorobenzene	ND	13B	66B	bis(2-ethylhexyl)phthalate	ND
368	128	hexachloroethane	ND	15B	67B	butyl benzyl phthalate	ND
118	188	bis(2-chloroethyl)ether	ND	26B 1204	68B	di-butyl phthalate	1 BL
168	208	2-chloronaphthalene	ND	29B	69B	di-n-octyl phthalate	ND
208	258	1,2-dichlorobenzene	ND	24B	70B	diethyl phthalate	ND
218	268	1,3-dichlorobenzene	ND	25B	71B	dimethyl phthalate	ND
228	278	1,4-dichlorobenzene	ND	5B	72B	benzo(a)anthracene A	ND
238	288	3,3'-dichlorobenzidine	ND	6B	73B	benzo(a)pyrene	ND
278	358	2,4-dinitrotoluene	ND	7B	74B	benzo(b)fluoranthene *	ND
288	368	2,6-dinitrotoluene	ND	9B	75B	benzo(k)fluoranthene *	ND
298	378	1,2-diphenylhydrazine	ND	18B	76B	chrysene A	ND
318	398	fluoranthene	ND	2B	77B	acenaphthylene	ND
178	408	4-chlorophenyl phenyl ether	ND	3B	78B	anthracene B	ND



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Results by Sample

REPORT

LAB # 86-02-122

Continued From Above

SAMPLE ID 860175 H2O

FRACTION 02A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/19/86

Category

14B	41B	4-bromophenyl phenyl ether	ND	8B	79B	benzo(ghi)perylene	ND
12B	42B	bis(2-chloroisopropyl)ether	ND	32B	80B	fluorene	ND
10B	43B	bis(2-chloroethoxy)methane	ND	44B	81B	phenanthrene B	ND
34B	52B	hexachlorobutadiene	ND	19B	82B	dibenzo(a,h)anthracene	ND
35B	53B	hexachlorocyclopentadiene	ND	37B	83B	indeno(1,2,3-cd)pyrene	ND
38B	54B	isophorone	ND	45B	84B	pyrene	ND
39B	55B	naphthalene	ND				
40B	56B	nitrobenzene	ND				

**SURROGATE RECOVERIES**

SCAN CODE	RESULT
3	
513 BS1	d5-nitrobenzene 72%
777 BS2	2-fluorobiphenyl 70%
1353 BS3	d14-terphenyl 86%
BS4	d10-biphenyl

**NOTES AND DEFINITIONS FOR THIS REPORT**

SCAN = scan number or retention time on chromatogram.  
 All results reported in ug/l unless otherwise specified.  
 ND = not detected at EPA detection limit method 625, (Federal Register, 10/26/84).  
 + = benzo(b)fluoranthene and benzo(k)fluoranthene co-elute.  
 A = benzo(a)anthracene and chrysene co-elute at high concentrations.

**WATKINS CORPORATION**

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Results by Sample

REPORT

LAB # 86-02-122

Continued From Above

SAMPLE ID 860175 H2O

FRACTION 02A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/19/86

Category

B = anthracene and phenanthrene co-elute in high concentrations.  
 SL = detected in reagent blank; background subtraction not performed.  
 J = estimated value; less than method detection limit.  
 CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection  
 limits should be multiplied by conc. factor.

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Analytical Serv  
Results by Sample

LAB # 86-02-122

SAMPLE ID 860175 H2O

FRACTION 02A TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS  
Date & Time Collected 02/19/86 Category

DATA FILE SC002122C02  
CONC. FACTOR

DATE EXTRACTED 02/20/86  
DATE INJECTED 03/06/86

ANALYST WJL

VERIFIED BY LAK  
COMPOUNDS DETECTED 0

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1P	89P	aldrin	ND	2P	102P	alpha BHC	ND
10P	90P	dieldrin	ND	3P	103P	beta BHC	ND
6P	91P	chlordane	ND	4P	104P	gamma BHC	ND
7P	92P	4,4'-DDT	ND	5P	105P	delta BHC	ND
8P	93P	4,4'-DDE	ND	18P	106P	PCB-1242	ND
9P	94P	4,4'-DDD	ND	19P	107P	PCB-1254	ND
11P	95P	alpha endosulfan	ND	20P	108P	PCB-1221	ND
12P	96P	beta endosulfan	ND	21P	109P	PCB-1232	ND
14P	97P	endosulfan sulfate	ND	22P	110P	PCB-1248	ND
14P	98P	endrin	ND	23P	111P	PCB-1260	ND
15P	99P	endrin aldehyde	ND	24P	112P	PCB-1016	ND
16P	100P	heptachlor	ND	25P	113P	toxaphene	ND
17P	101P	heptachlor epoxide	ND				

**ENVIRONMENTAL  
CORPORATION**

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Analytical Serv

REPORT

LAB # 86-02-122

Results by Sample

Continued From Above

SAMPLE ID 860175 H2O

FRACTION 02A

TEST CODE MS 608

NAME Pesticides & PCBs by GC/MS

Date & Time Collected 02/19/86

Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number on chromatogram.

All results reported in micrograms/liter unless otherwise specified.

ND = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).

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RECEIVED: 02/20/85

Analytical Serv

Results by Sample

REPORT

LAB # 86-02-122

SAMPLE ID 860176 H2O

FRACTION 03A

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected 02/19/86

Category

DATA FILE 5CU02122C03  
CONC. FACTOR 1

DATE EXTRACTED 02/20/86  
DATE INJECTED 03/06/86

ANALYST  
INSTRUMENT

WJL  
5100

VERIFIED BY LAK  
COMPOUNDS DETECTED 0

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
11A	21A	2,4,6-trichlorophenol	ND	7A	58A	4-nitrophenol	ND
8A	22A	4-chloro-3-methylphenol	ND	5A	59A	2,4-dinitrophenol	ND
1A	24A	2-chlorophenol	ND	4A	60A	2-methyl-4,6-dinitrophenol	ND
2A	31A	2,4-dichlorophenol	ND	9A	64A	pentachlorophenol	ND
3A	34A	2,4-dimethylphenol	ND	10A	65A	phenol	ND
6A	57A	2-nitrophenol	ND				

3 35 5

**SURROGATE RECOVERIES**

SCAN CODE	COMPOUND	RESULT
397 AS1	d5-phenol	9%
292 AS2	2-fluorophenol	32%
998 AS3	2,4,6-tribromophenol	116%
AS4	d3-phenol	

**NOTES AND DEFINITIONS FOR THIS REPORT.**

SCAN = scan number or retention time on chromatogram.  
All results reported in ug/l unless otherwise specified

**INSTRUMENTAL  
CORPORATION**

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RECEIVED: 02/20/86

Analytical Serv

REPORT

Results by Sample

LAB # 86-02-122

Continued From Above

SAMPLE ID 860176 H2O

FRACTION 03A

TEST CODE M625 A

NAME Method 625 Acid Compounds

Date & Time Collected 02/19/86

Category

ND = not detected at EPA detection limit method 625, (Federal Register, 11/26/84).

BL = detected in reagent blank; background subtraction not performed.

J = estimated value; less than method detection limit.

CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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RECEIVED: 02/20/86

Analytical Serv

REPORT

Results by Sample

LAB # 86-02-122

SAMPLE ID 860176 H2O

FRACTION 03A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/19/86

Category

DATA FILE 50002 22003  
CONC. FACTOR 1

DATE EXTRACTED 02/20/86  
DATE INJECTED 03/06/86

ANALYST  
INSTRUMENT

WJL  
5100

VERIFIED BY LAK  
COMPOUNDS DETECTED 3

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
16	16	acenaphthene	ND	41B	61B	N-nitrosodimethylamine	ND
48	5B	benzidine	ND	43B	980	N-nitrosodiphenylamine	3
46B	8B	1,2,4-trichlorobenzene	ND	42B	63B	N-nitrosodi-n-propylamine	ND
33B	9B	hexachlorobenzene	ND	13B	1531	bis(2-ethylhexyl)phthalate	8
34B	12B	hexachloroethane	ND	15B	67B	butyl benzyl phthalate	ND
11B	18B	bis(2-chloroethyl)ether	ND	26B	1204	di-butyl phthalate	3 BL
16B	20B	2-chloronaphthalene	ND	29B	69B	di-n-octyl phthalate	ND
20B	25B	1,2-dichlorobenzene	ND	24B	70B	diethyl phthalate	ND
21B	26B	1,3-dichlorobenzene	ND	25B	71B	dimethyl phthalate	ND
22B	27B	1,4-dichlorobenzene	ND	5B	72B	benzo(a)anthracene A	ND
23B	28B	3,3'-dichlorobenzidine	ND	6B	73B	benzo(a)pyrene	ND
27B	35B	2,4-dinitrotoluene	ND	7B	74B	benzo(b)fluoranthene *	ND
28B	36B	2,6-dinitrotoluene	ND	9B	75B	benzo(k)fluoranthene *	ND
29B	37B	1,2-diphenylhydrazine	ND	18B	76B	chrysene A	ND
31B	39B	fluoranthene	ND	2B	77B	acenaphthylene	ND
17B	40B	4-chlorophenyl phenyl ether	ND	3B	78B	anthracene B	ND

# ANALYTICAL SERVICES CORPORATION

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RECEIVED: 02/20/86

Analytical Serv

REPORT

Results by Sample

LAB # 86-02-122

Continued From Above

SAMPLE ID 860176 H20

FRACTION 03A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/19/86

Category

148	418	4-bromophenyl phenyl ether	ND	88	79B	benzo(ghi)perylene	ND
128	428	bis(2-chloroisopropyl)ether	ND	32B	80B	fluorene	ND
108	433	bis(2-chloroethoxy)methane	ND	44B	81B	phenanthrene B	ND
348	528	hexachlorobutadiene	ND	19B	82B	dibenzo(a,h)anthracene	ND
358	538	hexachlorocyclopentadiene	ND	37B	83B	indeno(1,2,3-cd)pyrene	ND
388	548	isophorone	ND	45B	84B	pyrene	ND
398	558	naphthalene	ND				
408	568	nitrobenzene	ND				

## SURROGATE RECOVERIES

SCAN CODE	RESULT
3 513 BS1	d5-nitrobenzene 116%
5 776 BS2	2-fluorobiphenyl 90%
8 1353 BS3	d14-terphenyl 60%
	d10-biphenyl

## NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN# = scan number or retention time on chromatogram.  
 All results reported in ug/l unless otherwise specified.  
 ND = not detected at EPA detection limit method 625, (Federal Register, 10/26/84).  
 4 = benzo(b)fluoranthene and benzo(k)fluoranthene co-elute.  
 A = benzo(a)anthracene and chrysene co-elute at high concentrations.



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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-122

Continued From Above

SAMPLE ID 860176 H20

FRACTION 03A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/19/86

Category

8 = anthracene and phenanthrene co-elute in high concentrations.  
 SL = detected in reagent blank; background subtraction not performed.  
 U = estimated value; less than method detection limit.  
 CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection  
 limits should be multiplied by conc. factor.

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RECEIVED: 02/20/86

Analytical Serv

REPORT

Results by Sample

LAB # 86-02-122

SAMPLE ID 860176 H2O

FRACTION 03A TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS

Date & Time Collected 02/19/86

Category

DATA FILE SCU02122C03

DATE EXTRACTED 02/20/86

ANALYST WJL

VERIFIED BY LAK

CONC. FACTOR

DATE INJECTED 03/06/86

COMPOUNDS DETECTED 0

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1P	89P	aldrin	ND	2P	102P	alpha BHC	ND
10P	90P	dieldrin	ND	3P	103P	beta BHC	ND
6P	91P	chlordane	ND	4P	104P	gamma BHC	ND
7P	92P	4,4'-DDT	ND	5P	105P	delta BHC	ND
8P	93P	4,4'-DDE	ND	18P	106P	PCB-1242	ND
9P	94P	4,4'-DDD	ND	19P	107P	PCB-1254	ND
11P	95P	alpha endosulfan	ND	20P	108P	PCB-1221	ND
12P	96P	beta endosulfan	ND	21P	109P	PCB-1232	ND
14P	97P	endosulfan sulfate	ND	22P	110P	PCB-1248	ND
14P	98P	endrin	ND	23P	111P	PCB-1260	ND
15P	99P	endrin aldehyde	ND	24P	112P	PCB-1016	ND
16P	100P	heptachlor	ND	25P	113P	toxaphene	ND
17P	101P	heptachlor epoxide	ND				

**ANALYTICAL CORPORATION**

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RECEIVED: 02/20/85

Analytical Serv

REPORT

Results by Sample

LAB # 86-02-122

Continued From Above

SAMPLE ID 860176 H2O

FRACTION 03A

TEST CODE MS 608

NAME Pesticides & PCBs by GC/MS

Date & Time Collected 02/19/86

Category

NOTES AND DEFINITIONS FOR THIS REPORT:

SCAN = scan number on chromatogram.

All results reported in micrograms/liter unless otherwise specified.

ND = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).

# ANALYTICAL SERVICE CORPORATION

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RECEIVED: 02/20/86

Analytical Serv

REPORT

Results by Sample

LAB # 86-02-122

SAMPLE ID Reagent Blank 625

FRACTION Q4A

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected not specified

Category

DATA FILE SCRO2122C04  
CONC. FACTOR 1

DATE EXTRACTED 02/20/86  
DATE INJECTED 03/06/86

ANALYST  
INSTRUMENT

MM  
5100

VERIFIED BY LAK  
COMPOUNDS DETECTED 0

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
11A	21A	2,4,6-trichlorophenol	ND	7A	58A	4-nitrophenol	ND
8A	22A	4-chloro-3-methylphenol	ND	5A	59A	2,4-dinitrophenol	ND
1A	24A	2-chlorophenol	ND	4A	60A	2-methyl-4,6-dinitrophenol	ND
2A	31A	2,4-dichlorophenol	ND	9A	64A	pentachlorophenol	ND
3A	34A	2,4-dimethylphenol	ND	10A	65A	phenol	ND
4A	57A	2-nitrophenol	ND				

3 362

## SURROGATE RECOVERIES

SCAN CODE	COMPOUND	RESULT
372 AS1	d5-phenol	61%
372 AS2	2-fluorophenol	66%
372 AS3	2,4,6-tribromophenol	99%
AS1	d3-phenol	

DO NOT INCLUDE FOR THIS REPORT.

Scan number or retention time on chromatogram.  
Results reported in ug/l unless otherwise specified

NO-A190 443 INSTALLATION RESTORATION PROGRAM PHASE 2  
CONFIRMATION/QUANTIFICATION STAG. (U) RADIAN CORP  
AUSTIN TX DEC 87 F33615-83-D-4801

NO-A190 443 INSTALLATION RESTORATION PROGRAM PHASE 2  
CONFIRMATION/QUANTIFICATION STAG. (U) RADIAN CORP  
AUSTIN TX DEC 87 F33615-83-D-4801

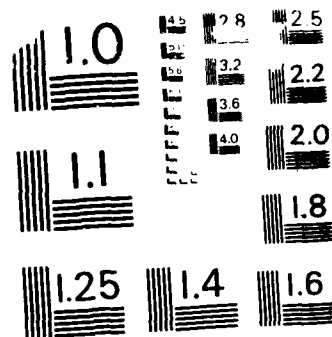
70-0190 443 INSTALLATION RESTORATION PROGRAM PHASE 2 5/6  
CONFIRMATION/QUANTIFICATION STAG. (U) RADIAN CORP  
AUSTIN TX DEC 87 F33615-83-D-4001

UNCLASSIFIED F/G 24/7 NL

UNCLASSIFIED F/G 24/7 NL

UNCLASSIFIED F/G 24/7 NL

A 10x10 grid of squares, with the top-left square missing, forming a shape resembling a staircase or a corner.



MICROCOPY RESOLUTION TEST CHART  
NATIONAL BUREAU OF STANDARDS-1963-A

**CORPORATION**

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RECEIVED: 02/20/86

Analytical Serv

REPORT

Results by Sample

LAB # 86-02-122

Continued From Above

SAMPLE ID Reagent Blank 625

FRACTION 04A

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected not specified

Category

NO = not detected at EPA detection limit method 625, (Federal Register, 11/26/84).  
 SL = detected in reagent blank, background subtraction not performed.  
 J = estimated value; less than method detection limit.  
 CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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RECEIVED: 02/20/86

Analytical Serv REPORT  
Results by Sample

LAB # 86-02-122

SAMPLE ID Reagent Blank 625

FRACTION 04A

TEST CODE M625 B NAME Method 625 Base/Neutrals

Date & Time Collected not specified

Category

DATA FILE 50602122C04 DATE EXTRACTED 02/20/86 ANALYST MM VERIFIED BY LAK  
CONC FACTOR 1 DATE INJECTED 03/06/86 INSTRUMENT 5100 COMPOUNDS DETECTED 1

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1B	1B	acenaphthene	ND	41B	61B	N-nitrosodimethylamine	ND
4B	5B	benzidine	ND	43B	62B	N-nitrosodiphenylamine	ND
42B	8B	1,2,4-trichlorobenzene	ND	42B	63B	N-nitrosodi-n-propylamine	ND
30B	9B	hexachlorobenzene	ND	13B	66B	bis(2-ethylhexyl)phthalate	ND
34B	12B	hexachloroethane	ND	15B	67B	butyl benzyl phthalate	ND
11B	18B	bis(2-chloroethyl)ether	ND	26B	68B	di-butyl phthalate	2
16B	20B	2-chloronaphthalene	ND	29B	69B	di-n-octyl phthalate	ND
20B	25B	1,2-dichlorobenzene	ND	24B	70B	diethyl phthalate	ND
21B	26B	1,3-dichlorobenzene	ND	25B	71B	dimethyl phthalate	ND
32B	27B	1,4-dichlorobenzene	ND	5B	72B	benzo(a)anthracene A	ND
23B	28B	3,3'-dichlorobenzidine	ND	6B	73B	benzo(a)pyrene	ND
27B	35B	2,4-dinitrotoluene	ND	7B	74B	benzo(b)fluoranthene *	ND
28B	34B	2,6-dinitrotoluene	ND	9B	75B	benzo(k)fluoranthene *	ND
29B	37B	1,2-diphenylhydrazine	ND	18B	76B	chrysene A	ND
21B	39B	fluoranthene	ND	2B	77B	acenaphthylene	ND
17B	40B	4-chlorophenyl phenyl ether	ND	3B	78B	anthracene B	ND



# WATKINS CORPORATION

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RECEIVED: 02/20/85

Analytical Serv

Results by Sample

REPORT

LAB # 86-02-122

Continued From Above

SAMPLE ID Reagent Blank 625

FRACTION 04A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected not specified

Category

14B	41B	4-bromophenyl phenyl ether	ND	8B	79B	benzo(ghi)perylene	ND
12B	42B	bis(2-chloroisopropyl)ether	ND	32B	80B	fluorene	ND
10B	43B	bis(2-chloroethoxy)methane	ND	44B	81B	phenanthrene B	ND
34B	52B	hexachlorobutadiene	ND	19B	82B	dibenzo(a,h)anthracene	ND
35B	53B	hexachlorocyclopentadiene	ND	37B	83B	indeno(1,2,3-cd)pyrene	ND
38B	54B	isophorone	ND	45B	84B	pyrene	ND
39B	55B	naphthalene	ND				
40B	56B	nitrobenzene	ND				

## SURROGATE RECOVERIES

SCAN CODE	RESULT
514 BS1	d5-nitrobenzene 88%
774 BS2	2-fluorobiphenyl 84%
1353 BS3	d14-terphenyl 72%
BS4	d10-biphenyl

## NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.  
 All results reported in ug/l unless otherwise specified.  
 ND = not detected at EPA detection limit method 625, (Federal Register, 10/26/84).  
 \* = benzo(b)fluoranthene and benzo(k)fluoranthene co-elute  
 A = benzo(a)anthracene and chrysene co-elute at high concentrations.

**ENVIRONMENTAL  
CORPORATION**

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RECEIVED: 02/20/86

Analytical Serv

REPORT

Results by Sample

LAB # 86-02-122

Continued From Above

SAMPLE ID Reagent Blank 625

FRACTION Q4A

TEST CODE M625 B NAME Method 625 Base/Neutrals

Date & Time Collected not specified

Category

B = anthracene and phenanthrene co-elute in high concentrations.  
BL = detected in reagent blank; background subtraction not performed.  
J = estimated value; less than method detection limit.  
CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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RECEIVED: 02/20/86

Analytical Serv

Results by Sample

REPORT

LAB # 86-02-122

SAMPLE ID Reagent Blank 625

FRACTION 04A

TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS

Date & Time Collected not specified

Category

DATA FILE SCPO2122C04

DATE EXTRACTED 02/20/86

ANALYST

VERIFIED BY LAK

CONC. FACTOR

DATE INJECTED 03/06/86

MM

COMPOUNDS DETECTED 0

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1P	87P	aldrin	ND	2P	102P	alpha BHC	ND
10P	90P	dieldrin	ND	3P	103P	beta BHC	ND
6P	91P	chlordane	ND	4P	104P	gamma BHC	ND
7P	92P	4,4'-DDT	ND	5P	105P	delta BHC	ND
8P	93P	4,4'-DDE	ND	18P	106P	PCB-1242	ND
9P	94P	4,4'-DDD	ND	19P	107P	PCB-1254	ND
11P	95P	alpha endosulfan	ND	20P	108P	PCB-1221	ND
12P	96P	beta endosulfan	ND	21P	109P	PCB-1232	ND
14P	97P	endosulfan sulfate	ND	22P	110P	PCB-1248	ND
14P	98P	endrin	ND	23P	111P	PCB-1260	ND
15P	99P	endrin aldehyde	ND	24P	112P	PCB-1016	ND
16P	100P	heptachlor	ND	25P	113P	toxaphene	ND
17P	101P	heptachlor epoxide	ND				

MACAMMILLAN  
CORPORATION

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RECEIVED: 02/20/85

Analytical Serv

REPORT

Results by Sample

LAB # 86-02-122

Continued From Above

SAMPLE ID Reagent Blank 625

FRACTION 04A

TEST CODE MS 608

NAME Pesticides & PCBs by GC/MS

Date & Time Collected not specified

Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number on chromatogram.

All results reported in micrograms/liter unless otherwise specified.

ND = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).

INFORMATION  
CORPORATION

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RECEIVED: 02/20/86

Analytical Serv

REPORT

LAB # 86-02-122

NonReported Work

FRACTION AND TEST CODES FOR WORK NOT REPORTED ELSEWHERE

01B : DUP\_NS  
02B : DUP\_NS  
03B : DUP\_NS

# RADIAN CORPORATION

PAGE 1

RECEIVED: 02/20/86

Analytical Serv

REPORT

04/25/86 15:10:25

LAB # 86-02-123

REPORT Radian  
TO BL 4

Austin

ATTEN Larry French

CLIENT PLANT 4

COMPANY Plant 4

FACILITY Carswell AFB (Gen. Dynamics)

SAMPLES 3

WORK ID HC (not done earlier)

TAKEN

TRANS

TYPE

P.O. # 212-027-27-

INVOICE under separate cover

PREPARED Radian Analytical Services

BY 8501 Mopac Blvd.

P.O. Box 9948

Austin, Texas 78766

ATTEN

PHONE (512) 434-4797

CONTACT CONOVER

CERTIFIED BY

*Joseph K. Michael*

## Footnotes and Comments

\* Indicates a value less than 3 times the detection limit.  
Potential error for such low values ranges between  
50 and 100%.

• Indicates that spike recovery for this analysis on the  
specific matrix was not within acceptable limits indicating  
an interferent present.

## SAMPLE IDENTIFICATION

01 860118 (8602019-01)

02 860119 (8602019-02)

03 860122 (8602031-01)

Analytical Serv TEST CODES and NAMES used on this report

HC IR Hydrocarbons

# **RADIAN** CORPORATION

PAGE 2

RECEIVED: 02/20/86

Analytical Serv

REPORT

RESULTS BY TEST

LAB # 86-02-123

-D R A F T-

TEST CODE	Sample 01	Sample 02	Sample 03
default units	(entered units)	(entered units)	(entered units)
HC IR	<1	<1	<1
mg/L			

3 371

PAGE 1

RECEIVED: 02/21/86

Analytical Serv

REPORT

LAB # 86-02-132

03/16/86 14:28:35

REPORT Radian Corporation  
TO Larry French  
Austin, Texas

ATTN

CLIENT PLANT 4 SAMPLES 6  
COMPANY General Dynamics  
FACILITY GEHL Plant 4, Bldg 4  
Austin, Texas

WORK ID Plant 4 - Fort Worth Texas  
TAKEN 2/20/86  
TRANS Fed Ex 764773236  
TYPE H2O  
P.O. # 212-027-27-40  
INVOICE under separate cover

PREPARED Radian Analytical Services  
BY 8501 Kopac Blvd.  
P.O. Box 9948  
Austin, Texas 78766  
ATTN  
PHONE (512) 454-4797

*Lucinda Peterson*  
CERTIFIED BY

CONTACT FRENCH

Footnotes and Comments

\* Indicates a value less than 5 times the detection limit.  
Potential error for such low values ranges between  
50 and 100%.

@ Indicates that spike recovery for this analysis on the  
specific matrix was not within acceptable limits indicating  
an interferent present.

SAMPLE IDENTIFICATION

01 B60181 H2O  
02 B60182 H2O  
03 B60183 H2O  
04 B60184 H2O  
05 B60185 H2O  
06 Reagent Blank BHA H2O

Analytical Serv TEST CODES and NAMES used on this report

EX 625 Extraction only - 625 BN/A  
M625 A Method 625 Acid Compounds  
M625 B Method 625 Base/Neutrals  
MS 608 Pesticides & PCBs by GC/MS



RECEIVED: 02/21/86

RESULTS BY TEST

TEST CODE	Sample 01	Sample 02	Sample 03	Sample 04	Sample 05
default units	(entered units)	(entered units)	(entered units)	(entered units)	(entered units)
EX 625	02/24/86	02/24/86	02/24/86	02/24/86	02/24/86
date complete					

TEST CODE	Sample 06
default units	(entered units)
EX 625	02/24/86
date complete	

PAGE 3

Analytical Serv

REPORT

LAB # 86-02-132

RECEIVED: 02/21/86

Results by Sample

SAMPLE ID 860181 H20

FRACTION 01A

TEST CODE M625 A

NAME Method 625 Acid Compounds

Date & Time Collected 02/20/86

Category

DATA FILE 50002132C01  
CONC. FACTOR 1

DATE EXTRACTED 02/24/86  
DATE INJECTED 03/06/86

ANALYST  
INSTRUMENT

MM  
5100  
COMPOUNDS DETECTED 0

VERIFIED BY LAK

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
11A	21A	2,4,6-trichlorophenol	ND	7A	58A	4-nitrophenol	ND
8A	22A	4-chloro-3-methylphenol	ND	5A	59A	2,4-dinitrophenol	ND
1A	24A	2-chlorophenol	ND	4A	60A	2-methyl-4,6-dinitrophenol	ND
2A	31A	2,4-dichlorophenol	ND	9A	64A	pentachlorophenol	ND
3A	34A	2,4-dimethylphenol	ND	10A	65A	phenol	ND
6A	57A	2-nitrophenol	ND				

3 374

SURROGATE RECOVERIES

SCAN CODE	COMPOUND	RESULT
328 451	d5-phenol	72%
293 492	2-fluorophenol	63%
577 493	2,4,6-tribromophenol	107%
494	d3-phenol	

NOTES AND DEFINITIONS FOR THIS REPORT

SCAN = scan number or retention time on chromatogram.  
All results reported in ug/l unless otherwise specified

**MAINTENANCE  
CORPORATION**

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-132

Continued From Above

SAMPLE ID 860181 H2O

FRACTION 01A

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected 02/20/86

Category

ND = not detected at EPA detection limit method 625, (Federal Register, 11/26/84).

SL = detected in reagent blank; background subtraction not performed.

J = estimated value; less than method detection limit.

CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

# CORPORATION

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Results by Sample

REPORT

LAB # 86-02-132

SAMPLE ID 860181 H20

FRACTION 01A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/20/86

Category

DATA FILE 50002132C01

DATE EXTRACTED 02/24/86

ANALYST

MM

VERIFIED BY LAK

CORC FACTOR 1

DATE INJECTED 03/06/86

INSTRUMENT

5100

COMPOUNDS DETECTED 2

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
18	18	acenaphthene	ND	41B	61B	N-nitrosodimethylamine	ND
4B	5B	benzidine	ND	43B	62B	N-nitrosodiphenylamine	ND
42B	8B	1,2,4-trichlorobenzene	ND	42B	63B	N-nitrosodi-n-propylamine	ND
33B	9B	hexachlorobenzene	ND	13B 1531	66B	bis(2-ethylhexyl)phthalate	2
36B	12B	hexachloroethane	ND	15B	67B	butyl benzyl phthalate	ND
11B	18B	bis(2-chloroethyl) ether	ND	26B 1203	68B	di-butyl phthalate	5 BL
14B	20B	2-chloronaphthalene	ND	29B	69B	di-n-octyl phthalate	ND
20B	25B	1,2-dichlorobenzene	ND	24B	70B	diethyl phthalate	ND
21B	26B	1,3-dichlorobenzene	ND	25B	71B	dimethyl phthalate	ND
22B	27B	1,4-dichlorobenzene	ND	5B	72B	benzo(a)anthracene A	ND
23B	28B	3,3'-dichlorobenzidine	ND	6B	73B	benzo(a)pyrene	ND
27B	35B	2,4-dinitrotoluene	ND	7B	74B	benzo(b)fluoranthene *	ND
28B	36B	2,6-dinitrotoluene	ND	9B	75B	benzo(k)fluoranthene *	ND
29B	37B	1,2-diphenylhydrazine	ND	18B	76B	chrysene A	ND
31B	39B	fluoranthene	ND	2B	77B	acenaphthylene	ND
17B	40B	4-chlorophenyl phenyl ether	ND	3B	78B	anthracene B	ND

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-132

Continued From Above

SAMPLE ID 860181 H20

FRACTION 01A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/20/86

Category

14B	41B	4-bromophenyl phenyl ether	ND	8B	79B	benzo(ghi)perylene	ND
12B	42B	bis(2-chloroisopropyl)ether	ND	32B	80B	fluorene	ND
10B	43B	bis(2-chloroethoxy)methane	ND	44B	81B	phenanthrene B	ND
34B	52B	hexachlorobutadiene	ND	19B	82B	dibenzo(a,h)anthracene	ND
35B	53B	hexachlorocyclopentadiene	ND	37B	83B	indeno(1,2,3-cd)pyrene	ND
38B	54B	isophorone	ND	45B	84B	pyrene	ND
39B	55B	naphthalene	ND				
40B	56B	nitrobenzene	ND				

SURROGATE RECOVERIES

SCAN CODE	RESULT
<u>513</u> BS1	d5-nitrobenzene <u>116%</u>
<u>776</u> BS2	2-fluorobiphenyl <u>126%</u>
<u>1352</u> BS3	d14-terphenyl <u>54%</u>
BS4	d10-biphenyl

3 377

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.  
 All results reported in ug/l unless otherwise specified.  
 ND = not detected at EPA detection limit method 625, (Federal Register, 10/26/84).  
 \* = benzo(b)fluoranthene and benzo(k)fluoranthene co-elute.  
 A = benzo(a)anthracene and chrysene co-elute at high concentrations.

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Results by Sample

REPORT

LAB # 86-02-132

Continued From Above

SAMPLE ID 860181 H2O

FRACTION 01A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/20/86

Category

B = anthracene and phenanthrene co-elute in high concentrations.  
 SL = detected in reagent blank; background subtraction not performed.  
 J = estimated value; less than method detection limit.  
 CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

# LABORATORY CORPORATION

Analytical Serv

REPORT

Results by Sample

LAB # 86-02-132

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SAMPLE ID 860181 H20

FRACTION 01A

TEST CODE MS 608

NAME Pesticides & PCBs by GC/MS

Date & Time Collected 02/20/86

Category

DATA FILE 5CU02132C01  
CONC. FACTOR

DATE EXTRACTED 02/24/86  
DATE INJECTED 03/06/86

ANALYST MM

VERIFIED BY LAK  
COMPOUNDS DETECTED 0

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1P	89P	aldrin	ND	2P	102P	alpha BHC	ND
10P	90P	dieldrin	ND	3P	103P	beta BHC	ND
6P	91P	chlordane	ND	4P	104P	gamma BHC	ND
7P	92P	4,4'-DDT	ND	5P	105P	delta BHC	ND
8P	93P	4,4'-DDE	ND	18P	106P	PCB-1242	ND
9P	94P	4,4'-DDD	ND	19P	107P	PCB-1254	ND
11P	95P	alpha endosulfan	ND	20P	108P	PCB-1221	ND
12P	96P	beta endosulfan	ND	21P	109P	PCB-1232	ND
14P	97P	endosulfan sulfate	ND	22P	110P	PCB-1248	ND
14P	98P	endrin	ND	23P	111P	PCB-1260	ND
15P	99P	endrin aldehyde	ND	24P	112P	PCB-1016	ND
16P	100P	heptachlor	ND	25P	113P	toxaphene	ND
17P	101P	heptachlor epoxide	ND				

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REPORT

Results by Sample

LAB # 86-02-132

Continued From Above

SAMPLE ID 860181 H2O

FRACTION 01A TEST CODE MS 608

NAME Pesticides & PCBs by GC/MS

Date & Time Collected 02/20/86

Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number on chromatogram.

All results reported in micrograms/liter unless otherwise specified.

ND = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).



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Analytical Serv

Results by Sample

LAB # 86-02-132

REPORT

SAMPLE ID 860182 H20

FRACTION 02A

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected 02/20/86

Category

DATA FILE SCU02132C02  
CONC. FACTOR 1

DATE EXTRACTED 02/24/86  
DATE INJECTED 03/06/86

ANALYST  
INSTRUMENT 5100

VERIFIED BY LAK  
COMPOUNDS DETECTED 1

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
11A	21A	2,4,6-trichlorophenol	ND	7A	58A	4-nitrophenol	ND
8A	22A	4-chloro-3-methylphenol	ND	5A	59A	2,4-dinitrophenol	ND
1A	24A	2-chlorophenol	ND	4A	60A	2-methyl-4,6-dinitrophenol	ND
2A	31A	2,4-dichlorophenol	ND	9A	64A	pentachlorophenol	ND
3A	34A	2,4-dimethylphenol	ND	10A	401 65A	phenol	2
6A	57A	2-nitrophenol	ND				

3 381

SURROGATE RECOVERIES

SCAN CODE	COMPOUND	RESULT
379 AS1	d5-phenol	78%
275 AS2	2-fluorophenol	79%
538 AS3	2,4,6-tribromophenol	118%
AS4	d3-phenol	

NOTES AND DEFINITIONS FOR THIS REPORT

SCAN = scan number or retention time on chromatogram.  
All results reported in ug/l unless otherwise specified.

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-132

Continued From Above

SAMPLE ID 860182 H2O

FRACTION 02A

TEST CODE M625 A

NAME Method 625 Acid Compounds

Date & Time Collected 02/20/86

Category

ND = not detected at EPA detection limit method 625, (Federal Register, 11/26/84).

EL = detected in reagent blank; background subtraction not performed.

J = estimated value; less than method detection limit.

CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-132

SAMPLE ID 860182 H2O

FRACTION 02A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/20/86

Category

DATA FILE	SCU02132C02	DATE EXTRACTED	02/24/86	ANALYST	MM	VERIFIED BY	LAK
CORC FACTOR	1	DATE INJECTED	03/06/86	INSTRUMENT	5100	COMPOUNDS DETECTED	1
NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1B	1B	acenaphthene	ND	41B	61B	N-nitrosodimethylamine	ND
4B	5B	benzidine	ND	43B	62B	N-nitrosodiphenylamine	ND
46B	8B	1,2,4-trichlorobenzene	ND	42B	63B	N-nitrosodi-n-propylamine	ND
33B	9B	hexachlorobenzene	ND	13B	64B	bis(2-ethylhexyl)phthalate	ND
36B	12B	hexachloroethane	ND	15B	67B	butyl benzyl phthalate	ND
11B	18B	bis(2-chloroethyl)ether	ND	26B	1204	di-butyl phthalate	3 BL
16B	20B	2-chloronaphthalene	ND	29B	69B	di-n-octyl phthalate	ND
20B	25B	1,2-dichlorobenzene	ND	24B	70B	diethyl phthalate	ND
21B	26B	1,3-dichlorobenzene	ND	25B	71B	dimethyl phthalate	ND
22B	27B	1,4-dichlorobenzene	ND	5B	72B	benzo(a)anthracene A	ND
23B	28B	3,3'-dichlorobenzidine	ND	6B	73B	benzo(a)pyrene	ND
27B	35B	2,4-dinitrotoluene	ND	7B	74B	benzo(b)fluoranthene *	ND
28B	36B	2,6-dinitrotoluene	ND	9B	75B	benzo(k)fluoranthene *	ND
29B	37B	1,2-diphenylhydrazine	ND	18B	76B	chrysene A	ND
31B	39B	fluoranthene	ND	28B	77B	acenaphthylene	ND
17B	40B	4-chlorophenyl phenyl ether	ND	38B	78B	anthracene B	ND

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Results by Sample

REPORT

LAB # 86-02-132

Continued From Above

SAMPLE ID 860182 H20

FRACTION 02A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/20/86

Category

14B	41B	4-bromophenyl phenyl ether	ND	8B	79B	benzo(ghi)perylene	ND
12B	42B	bis(2-chloroisopropyl)ether	ND	32B	80B	fluorene	ND
10B	43B	bis(2-chloroethoxy)methane	ND	44B	81B	phenanthrene B	ND
34B	52B	hexachlorobutadiene	ND	19B	82B	dibenzo(a,h)anthracene	ND
35B	53B	hexachlorocyclopentadiene	ND	37B	83B	indeno(1,2,3-cd)pyrene	ND
38B	54B	isophorone	ND	45B	84B	pyrene	ND
39B	55B	naphthalene	ND				
40B	56B	nitrobenzene	ND				

**SURROGATE RECOVERIES**

SCAN CODE	RESULT
514 BS1	d5-nitrobenzene 98%
776 BS2	2-fluorobiphenyl 92%
1253 BS3	d14-terphenyl 50%
BS4	d10-biphenyl

**3 384**

**NOTES AND DEFINITIONS FOR THIS REPORT**

SCAN = scan number or retention time on chromatogram  
 All results reported in ug/l unless otherwise specified  
 ND = not detected at EPA detection limit method 625, (Federal Register, 10/26/84).  
 + = benzo(b)fluoranthene and benzo(k)fluoranthene co-elute  
 A = benzo(a)anthracene and chrysene co-elute at high concentrations.

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-132

Continued From Above

SAMPLE ID 860182 H2O

FRACTION 02A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/20/86

Category

B = anthracene and phenanthrene co-elute in high concentrations.  
BL = detected in reagent blank, background subtraction not performed.  
J = estimated value, less than method detection limit.  
CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Analytical Serv  
Results by Sample

LAB # 86-02-132

SAMPLE ID 860182 H20

FRACTION 02A TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS  
Date & Time Collected 02/20/86 Category

DATA FILE SCU02132C02

DATE EXTRACTED 02/24/86  
DATE INJECTED 03/06/86

ANALYST MM

VERIFIED BY LAK  
COMPOUNDS DETECTED 0

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1P	89P	aldrin	ND	2P	102P	alpha BHC	ND
10P	90P	dieldrin	ND	3P	103P	beta BHC	ND
6P	91P	chlordane	ND	4P	104P	gamma BHC	ND
7P	92P	4,4'-DDT	ND	5P	105P	delta BHC	ND
8P	93P	4,4'-DDE	ND	18P	106P	PCB-1242	ND
9P	94P	4,4'-DDD	ND	19P	107P	PCB-1254	ND
11P	95P	alpha endosulfan	ND	20P	108P	PCB-1221	ND
12P	96P	beta endosulfan	ND	21P	109P	PCB-1232	ND
14P	97P	endosulfan sulfate	ND	22P	110P	PCB-1248	ND
15P	98P	endrin aldehyde	ND	24P	112P	PCB-1016	ND
16P	100P	heptachlor	ND	25P	113P	toxaphene	ND
17P	101P	heptachlor epoxide	ND				

**WATKINS CORPORATION**

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-132

Continued From Above

SAMPLE ID 850182 H2O

FRACTION 02A

TEST CODE MS 608

NAME Pesticides & PCBs by GC/MS

Date & Time Collected 02/20/86

Category

NOTES AND DEFINITIONS FOR THIS REPORT:

SCAN = scan number on chromatogram

All results reported in micrograms/liter unless otherwise specified.

ND = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).

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Analytical Serv  
Results by Sample

LAB # 86-02-132

SAMPLE ID 860183 H20

FRACTION 03A

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected 02/20/86

Category

DATA FILE SCU02132C03  
CONC FACTOR 1 2

DATE EXTRACTED 02/24/86  
DATE INJECTED 03/06/86

ANALYST  
INSTRUMENT

MM  
5100  
VERIFIED BY LAK  
COMPOUNDS DETECTED 1

INDEX	SCAN	EPA	COMPOUND	RESULT	NPDES	SCAN	EPA	COMPOUND	RESULT
11A	21A		2,4,6-trichlorophenol	ND	7A	58A		4-nitrophenol	ND
8A	22A		4-chloro-3-methylphenol	ND	5A	59A		2,4-dinitrophenol	ND
1A	24A		2-chlorophenol	ND	4A	60A		2-methyl-4,6-dinitrophenol	ND
2A	31A		2,4-dichlorophenol	ND	9A	64A		pentachlorophenol	ND
3A	34A		2,4-dimethylphenol	ND	10A	400	65A	phenol	4
6A	57A		2-nitrophenol	ND					

3 388

SURROGATE RECOVERIES

SCAN CODE	COMPOUND	RESULT
232 451	45-phenol	71%
232 452	2-fluorophenol	66%
522 453	2,4,6-tribromophenol	114%
454	43-phenol	

NOTES AND DEFINITIONS FOR THIS REPORT

SCAN = scan number or retention time on chromatogram  
All results reported in % unless otherwise specified



ANALYTICAL  
CORPORATION

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-132

Continued From Above

SAMPLE ID 860183 H2O

FRACTION 03A

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected 02/20/86

Category

ND = not detected at EPA detection limit method 625, (Federal Register, 11/26/84).

SL = detected in reagent blank, background subtraction not performed.

J = estimated value, less than method detection limit.

CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-132

SAMPLE ID 860183 H20

FRACTION 03A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/20/86

Category

DATA FILE 50002132C03		DATE EXTRACTED 02/24/86		ANALYST		MM		VERIFIED BY LAK	
CURC	FACTOR	1.2	DATE INJECTED 03/06/86	INSTRUMENT	5100	COMPOUNDS DETECTED	1	1	1
NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT	RESULT	RESULT
1B	1B	acenaphthene	ND	41B	61B	N-nitrosodimethylamine	ND	ND	ND
4B	5B	benzidine	ND	43B	62B	N-nitrosodiphenylamine	ND	ND	ND
46B	82	1,2,4-trichlorobenzene	ND	42B	63B	N-nitrosodi-n-propylamine	ND	ND	ND
53B	95	hexachlorobenzene	ND	13B	66B	bis(2-ethylhexyl)phthalate	ND	ND	ND
34B	12B	hexachloroethane	ND	15B	67B	butyl benzyl phthalate	ND	ND	ND
11B	18B	bis(2-chloroethyl)ether	ND	26B	1204	di-butyl phthalate	2 BL	2 BL	2 BL
15B	20B	2-chloronaphthalene	ND	29B	69B	di-n-octyl phthalate	ND	ND	ND
20B	25B	1,2-dichlorobenzene	ND	24B	70B	diethyl phthalate	ND	ND	ND
21B	26B	1,3-dichlorobenzene	ND	25B	71B	dimethyl phthalate	ND	ND	ND
22B	27B	1,4-dichlorobenzene	ND	5B	72B	benzo(a)anthracene A	ND	ND	ND
23B	28B	3,3'-dichlorobenzidine	ND	6B	73B	benzo(a)pyrene	ND	ND	ND
27B	35B	2,4-dinitrotoluene	ND	7B	74B	benzo(b)fluoranthene #	ND	ND	ND
28B	29B	2,6-dinitrotoluene	ND	9B	75B	benzo(k)fluoranthene #	ND	ND	ND
29B	37B	1,2-diphenylhydrazine	ND	18B	76B	chrysene A	ND	ND	ND
31B	39B	fluoranthene	ND	2B	77B	acenaphthylene	ND	ND	ND
17B	40B	4-chlorophenyl phenyl ether	ND	3B	78B	anthracene B	ND	ND	ND

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Results by Sample

REPORT

LAB # 86-02-132

Continued From Above

SAMPLE ID 860183 H20

FRACTION 03A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/20/86

Category

148	413	4-bromophenyl phenyl ether	ND	88	79B	benzo(ghi)perylene	ND
128	428	bis(2-chloroisopropyl)ether	ND	32B	80B	fluorene	ND
108	438	bis(2-chloroethoxy)methane	ND	44B	81B	phenanthrene B	ND
348	528	hexachlorobutadiene	ND	19B	82B	dibenzo(a,h)anthracene	ND
358	538	hexachlorocyclopentadiene	ND	37B	83B	indeno(1,2,3-cd)pyrene	ND
388	548	isophorone	ND	45B	84B	pyrene	ND
398	558	naphthalene	ND				
408	568	nitrobenzene	ND				

**SURROGATE RECOVERIES**

SCAN CODE	RESULT
<u>514</u> 2S1	d5-nitrobenzene 98%
<u>777</u> 8S2	2-fluorobiphenyl 108%
<u>1353</u> 8S3	d14-terphenyl 76%
3S4	d10-biphenyl

**3 391**

**NOTES AND DEFINITIONS FOR THIS REPORT**

SCAN# = scan number or retention time on chromatogram.  
 All results reported in ug/L unless otherwise specified.  
 ND = not detected at EPA detection limit method 625, (Federal Register, 10/26/84).  
 † = benzo(b)fluoranthene and benzo(k)fluoranthene co-elute.  
 ‡ = benzo(a)anthracene and chrysene co-elute, high concentrations.

**CORPORATION**

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REPORT

Results by Sample

LAB # 86-02-132

Continued From Above

SAMPLE ID S60183 H20

FRACTION 03A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/20/86

Category

S = anthracene and phenanthrene co-elute in high concentrations.

BL = detected in reagent blank, background subtraction not performed.

D = estimated value, less than method detection limit.

CONC FACTOR indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc factor.

# CORPORATION

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Analytical Serv  
Results by Sample

LAB # 86-02-132

SAMPLE ID 860183 H20

FRACTION 03A

TEST CODE MS 608

NAME Pesticides & PCBs by GC/MS

Date & Time Collected 02/20/86

Category

DATA FILE 55092132C03  
CUNC FACTOR

DATE EXTRACTED 02/24/86  
DATE INJECTED 03/06/86

ANALYST NM

VERIFIED BY LAK  
COMPOUNDS DETECTED 0

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1P	89P	aldrin	ND	2P	102P	alpha BHC	ND
10P	90P	dieldrin	ND	3P	103P	beta BHC	ND
6P	91P	chlordane	ND	4P	104P	gamma BHC	ND
7P	92P	4,4'-DDT	ND	5P	105P	delta BHC	ND
8P	93P	4,4'-DDE	ND	18P	106P	PCB-1242	ND
9P	94P	4,4'-DDD	ND	19P	107P	PCB-1254	ND
11P	95P	alpha endosulfan	ND	20P	108P	PCB-1221	ND
12P	96P	beta endosulfan	ND	21P	109P	PCB-1232	ND
14P	97P	endosulfan sulfate	ND	22P	110P	PCB-1248	ND
14P	98P	endrin	ND	23P	111P	PCB-1260	ND
15P	99P	endrin aldehyde	ND	24P	112P	PCB-1016	ND
16P	100P	heptachlor	ND	25P	113P	toxaphene	ND
17P	101P	heptachlor epoxide	ND				

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REPORT

Results by Sample

LAB # 86-02-132

Continued From Above

SAMPLE ID 860183 H2O

FRACTION 03A TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS

Date & Time Collected 02/20/86

Category

NOTES AND DEFINITIONS FOR THIS REPORT:

SCAN = scan number on chromatogram.

All results reported in micrograms/liter unless otherwise specified.

ND = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).

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Results by Sample

REPORT

LAB # 86-02-132

SAMPLE ID 860184 H2O

FRACTION 04A

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected 02/20/86

Category

DATA FILE 50002132C04  
CONC FACTOR 1

DATE EXTRACTED 02/24/86  
DATE INJECTED 03/06/86

ANALYST  
INSTRUMENT

VERIFIED BY LAK  
COMPOUNDS DETECTED 1

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
11A	21A	2,4,6-trichlorophenol	ND	7A	58A	4-nitrophenol	ND
2A	22A	4-chloro-3-methylphenol	ND	5A	59A	2,4-dinitrophenol	ND
1A	24A	2-chlorophenol	ND	4A	60A	2-methyl-4,6-dinitrophenol	ND
2A	31A	2,4-dichlorophenol	ND	9A	64A	pentachlorophenol	ND
3A	34A	2,4-dimethylphenol	ND	10A	400	phenol	1
6A	57A	2-nitrophenol	ND				

3 395

**SURROGATE RECOVERIES**

SCAN CODE	COMPOUND	RESULT
399 AS1	45-phenol	75%
349 AS2	2-fluorophenol	70%
399 AS3	2,4,6-tribromophenol	131%
AS4	40 phenol	

**NOTES AND DEFINITIONS FOR THIS REPORT**

SCAN = scan number of retention time on chromatogram  
All results reported in % unless otherwise specified.

**LABORATORY CORPORATION**

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REPORT

Results by Sample

LAB # 86-02-132

Continued From Above

SAMPLE ID 860184 H20

FRACTION 04A

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected 02/20/86

Category

ND = not detected at EPA detection limit method 625, (Federal Register, 11/26/84).

BL = detected in reagent blank, background subtraction not performed.

J = estimated value, less than method detection limit.

COND. FACTOR indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc factor.



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Results by Sample

LAB # 86-02-132

SAMPLE ID 860184 H2O

FRACTION 04A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/20/86

Category

DATA FILE		SOURCE		DATE EXTRACTED		DATE INJECTED		ANALYST		NM		VERIFIED BY	
CONC		FACTOR		1		1		INSTRUMENT		5100		COMPOUNDS DETECTED	
INDEXES	SCAN	EPA	COMPOUND	RESULT	INDEXES	SCAN	EPA	COMPOUND	RESULT	INDEXES	SCAN	EPA	COMPOUND
16	1B		acenaphthene	ND	41B	61B		N-nitrosodimethylamine	ND				
4B	5B		benzidine	ND	43E	62B		N-nitrosodiphenylamine	ND				
45D	6B		1,2,4-trichlorobenzene	ND	42B	63B		N-nitrosodi-n-propylamine	ND				
33B	9B		hexachlorobenzene	ND	13B	153C	66B	bis(2-ethylhexyl)phthalate	3				
34B	12B		hexachloroethane	ND	15E	67B		butyl benzyl phthalate	ND				
11B	16B		bis(2-chloroethyl)ether	ND	26B	1205	68B	di-butyl phthalate	3 BL				
14B	20B		2-chloronaphthalene	ND	27B	69B		di-n-octyl phthalate	ND				
20B	25B		1,2-dichlorobenzene	ND	24B	70B		diethyl phthalate	ND				
21B	26B		1,3-dichlorobenzene	ND	25B	71B		dimethyl phthalate	ND				
22B	27B		1,4-dichlorobenzene	ND	5B	72B		benzo(a)anthracene A	ND				
23B	28B		3,3-dichlorobenzidine	ND	6B	73B		benzo(a)pyrene	ND				
27B	35B		2,4-dinitrotoluene	ND	7E	74B		benzo(b)fluoranthene *	ND				
28B	36B		2,6-dinitrotoluene	ND	9B	75B		benzo(k)fluoranthene *	ND				
29B	37B		1,2-diphenylhydrazine	ND	16B	76B		chrysene A	ND				
31B	38B		fluoranthene	ND	2L	77B		acenaphthylene	ND				
17B	40B		4-chlorophenyl phenyl ether	ND	26	78B		anthracene B	ND				

# WATKINS CORPORATION

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Results by Sample

REPORT

LAB # 86-02-132

Continued From Above

SAMPLE ID 850184 H20

FRACTION 04A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/20/86

Category

148	413	4-bromophenyl phenyl ether	ND	88	79B	benzo(ghi)perylene	ND
158	423	bis(2-chloroisopropyl)ether	ND	32B	80B	fluorene	ND
108	43B	bis(2-chloroethoxy)methane	ND	44B	81B	phenanthrene B	ND
34B	52B	hexachlorobutadiene	ND	19B	82B	dibenzo(a,h)anthracene	ND
35B	53B	hexachlorocyclopentadiene	ND	37B	83B	indeno(1,2,3-cd)pyrene	ND
38B	54B	isophorone	ND	45B	84B	pyrene	ND
39B	55B	naphthalene	ND				
40B	55B	nitrobenzene	ND				

## SURROGATE RECOVERIES

SCAN CODE	RESULT
514 ES1	d5-nitrobenzene 92%
577 BS2	2-fluorobiphenyl 106%
1054 ES3	d14-terphenyl 52%
884	d10-biphenyl

3 398

## NOTES AND DEFINITIONS FOR THIS REPORT

SCAN = scan number or retention time on chromatogram  
 All results reported in this report unless otherwise specified  
 ND = not detected at EPA detection limit method 625, (Federal Register, 10/26/84).  
 4 = benzo(b)fluoranthene and benzo(k)fluoranthene co-elute  
 A = benzo(a)anthracene and chrysene co-elute at high concentrations.

**ANALYTICAL CORPORATION**

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REPORT

Results by Sample

LAB # 86-02-132

Continued From Above

SAMPLE ID 860184 H2O

FRACTION 04A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/20/86

Category

S = anthracene and phenanthrene co-elute in high concentrations.  
DL = detected in reagent blank, background subtraction not performed.  
U = estimated value; less than method detection limit  
DILUTION FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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REPORT

Results by Sample

LAB # 86-02-132

SAMPLE ID 860184 H20

FRACTION 04A

TEST CODE MS 608

NAME Pesticides & PCBs by GC/MS

Date & Time Collected 02/20/86

Category

DATA FILE 80002132C04

DATE EXTRACTED 02/24/86

ANALYST MM

VERIFIED BY LAK

CONC FACTOR

DATE INJECTED 03/06/86

COMPOUNDS DETECTED O

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1P	89P	aldrin	ND	2P	102P	alpha BHC	ND
10P	90P	dieldrin	ND	3P	103P	beta BHC	ND
6P	91P	chlordane	ND	4P	104P	gamma BHC	ND
7P	92P	4,4'-DDT	ND	5P	105P	delta BHC	ND
8P	93P	4,4'-DDE	ND	16P	106P	PCB-1242	ND
9P	94P	4,4'-DDD	ND	19P	107P	PCB-1254	ND
11P	95P	alpha endosulfan	ND	20P	108P	PCB-1221	ND
12P	96P	beta endosulfan	ND	21P	109P	PCB-1232	ND
14P	97P	endosulfan sulfate	ND	22P	110P	PCB-1248	ND
16P	98P	endrin	ND	23P	111P	PCB-1260	ND
18P	99P	endrin aldehyde	ND	24P	112P	PCB-1016	ND
19P	100P	heptachlor	ND	25P	113P	toxaphene	ND
17P	101P	heptachlor epoxide	ND				

**LABORATORY CORPORATION**

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REPORT

LAB # 86-02-132

Results by Sample

Continued From Above

SAMPLE ID 860184 H2O

FRACTION 04A

TEST CODE NS 608

NAME Pesticides & PCBs by GC/MS

Date & Time Collected 02/20/86

Category

NOTES AND DEFINITIONS FOR THIS REPORT

SCAN = scan number on chromatogram.

All results reported in micrograms/liter unless otherwise specified.

ND = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).

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Results by Sample

LAB # 86-02-132

SAMPLE ID 850185 H2O

FRACTION 05A

TEST CUBE M625 A NAME Method 625 Acid Compounds

Date & Time Collected 02/20/86

Category

DATA FILE 55002132005  
CONC FACTOR 2

DATE EXTRACTED 02/24/86  
DATE INJECTED 03/06/86

ANALYST INSTRUMENT MM  
5100 COMPOUNDS DETECTED 0

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
11A	21A	2,4,6-trichlorophenol	ND	7A	58A	4-nitrophenol	ND
2A	22A	4-chloro-3-methylphenol	ND	5A	59A	2,4-dinitrophenol	ND
1A	24A	2-chlorophenol	ND	4A	60A	2-methyl-4,6-dinitrophenol	ND
2A	31A	2,4-dichlorophenol	ND	9A	64A	pentachlorophenol	ND
3A	34A	2,4-dimethylphenol	ND	10A	65A	phenol	ND
2A	57A	2-nitrophenol	ND				

3 402

SURROGATE RECOVERIES

SCAN CODE	COMPOUND	RESULT
401 451	4-nitrophenol	78%
402 452	2-fluorophenol	74%
1000 453	2,4,6-tribromophenol	133%
454	4-nitrophenol	

NOTES AND REVISIONS FOR THIS REPORT

5204 is scan number of retention time on chromatogram  
All results reported in % unless otherwise specified

CORPORATION

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REPORT

LAB # 86-02-132

Results by Sample

Continued From Above

SAMPLE ID 850185 H2O

FRACTION 05A

TEST CODE M625 A

NAME Method 625 Acid Compounds

Date & Time Collected 02/20/86

Category

ND = not detected at EPA detection limit method 625, (Federal Register, 11/26/84).

SI = detected in reagent blank; background subtraction not performed.

J = estimated value; less than method detection limit.

CONC FACTOR indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc factor.

**CORPORATION**

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REPORT

LAB # 86-02-132

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Results by Sample

SAMPLE ID 860185 H2U

FRACTION 05A

TEST CODE H625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/20/86

Category

DATA FILE 5200152C05		DATE EXTRACTED 02/24/86	ANALYST	VERIFIED BY LAK			
CONC	FACTOR	DATE INJECTED 03/06/86	INSTRUMENT	MM	COMPOUNDS DETECTED 1		
NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
10	10	acenaphthene	ND	41B	61B	N-nitrosodimethylamine	ND
40	50	benzidine	ND	43B	62B	N-nitrosodiphenylamine	ND
46B	60	1,2,4-trichlorobenzene	ND	42B	63B	N-nitrosodi-n-propylamine	ND
93B	90	hexachlorobenzene	ND	13B	66B	bis(2-ethylhexyl)phthalate	ND
120	120	hexachloroethane	ND	15B	67B	butyl benzyl phthalate	ND
110	100	bis(2-chloroethyl)ether	ND	26B	1205	di-butyl phthalate	2 BL
160	200	2-chloronaphthalene	ND	29B	69B	di-n-octyl phthalate	ND
200	250	1,2-dichlorobenzene	ND	24B	70B	diethyl phthalate	ND
210	260	1,3-dichlorobenzene	ND	25B	71B	dimethyl phthalate	ND
220	270	1,4-dichlorobenzene	ND	5B	72B	benzo(a)anthracene A	ND
230	280	3,3'-dichlorobenzidine	ND	6B	73B	benzo(a)pyrene	ND
270	350	2,4-dinitrotoluene	ND	75	74B	benzo(b)fluoranthene *	ND
280	360	2,6-dinitrotoluene	ND	9B	75B	benzo(k)fluoranthene *	ND
390	370	1,2-diphenylhydrazine	ND	100	76B	chrysene A	ND
310	340	fluoranthene	ND	20B	77B	acenaphthylene	ND
170	300	4-chlorophenyl phenyl ether	ND	70B	78B	anthracene B	ND



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REPORT

Results by Sample

LAB # 86-02-132

Continued From Above

SAMPLE ID 860185 H20

FRACTION 05A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/20/86

Category

148	418	4-bromophenyl phenyl ether	ND	88	79B	benzo(ghi)perylene	ND
128	428	bis(2-chloroisopropyl)ether	ND	32B	80B	fluorene	ND
108	438	bis(2-chloroethoxy)methane	ND	44B	81B	phenanthrene B	ND
348	528	hexachlorobutadiene	ND	19B	82B	dibenzo(a,h)anthracene	ND
358	538	hexachlorocyclopentadiene	ND	37B	83B	indeno(1,2,3-cd)pyrene	ND
388	548	isophorone	ND	45B	84B	pyrene	ND
398	558	naphthalene	ND				
408	568	nitrobenzene	ND				

SURROGATE RECOVERIES

SCAN CODE	RESULT
515 BS1	d5-nitrobenzene 102%
778 BS2	2-fluorobiphenyl 125%
1254 BS3	d14-terphenyl 108%
BS4	d10-biphenyl

3 405

NOTES AND DEFINITIONS FOR THIS REPORT

SCAN # scan number or retention time on chromatogram  
 All results reported in this report unless otherwise specified  
 ND = not detected at EPA detection limit method 625, (Federal Register, 10/26/84)  
 a = benzo(b)fluoranthene and benzo(k)fluoranthene to elute  
 A = benzo(a)anthracene and chrysene to elute at high concentrations.

**LABORATORY CORPORATION**

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REPORT

Results by Sample

LAB # 86-02-132

Continued From Above

SAMPLE ID 860185 H2O

FRACTION 05A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/20/86

Category

B = anthracene and phenanthrene co-elute in high concentrations.  
SL = detected in reagent blank; background subtraction not performed.  
J = estimated value; less than method detection limit.  
CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Results by Sample

LAB # 86-02-132

SAMPLE ID 850185 H20

FRACTION 05A TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS

Date & Time Collected 02/20/86

Category

DATA FILE SCU02132C05  
CONC. FACTOR

DATE EXTRACTED 02/24/86  
DATE INJECTED 03/06/86

ANALYST MM

VERIFIED BY LAK  
COMPOUNDS DETECTED 0

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1P	89P	aldrin	ND	2P	102P	alpha BHC	ND
10P	90P	dieldrin	ND	3P	103P	beta BHC	ND
6P	91P	chlordane	ND	4P	104P	gamma BHC	ND
7P	92P	4,4'-DDT	ND	5P	105P	delta BHC	ND
8P	93P	4,4'-DDE	ND	18P	106P	PCB-1242	ND
9P	94P	4,4'-DDD	ND	19P	107P	PCB-1254	ND
11P	95P	alpha endosulfan	ND	20P	108P	PCB-1221	ND
12P	96P	beta endosulfan	ND	21P	109P	PCB-1232	ND
14P	97P	endosulfan sulfate	ND	22P	110P	PCB-1248	ND
14P	98P	endrin	ND	23P	111P	PCB-1260	ND
15P	99P	endrin aldehyde	ND	24P	112P	PCB-1016	ND
16P	100P	heptachlor	ND	25P	113P	toxaphene	ND
17P	101P	heptachlor epoxide	ND				

**ENVIRONMENTAL  
CORPORATION**

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REPORT

Results by Sample

LAB # 86-02-132

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SAMPLE ID 860185 HED

FRACTION 05A

TEST CODE MS 608

NAME Pesticides & PCBs by GC/MS

Date & Time Collected 02/20/86

Category

**NOTES AND DEFINITIONS FOR THIS REPORT:**

SCAN = scan number on chromatogram.

All results reported in micrograms/liter unless otherwise specified.

ND = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).

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Results by Sample

REPORT

LAB # 86-02-132

SAMPLE ID Reagent Blank BNA H2O

FRACTION 06A

TEST CODE N625 A NAME Method 625 Acid Compounds

Date & Time Collected not specified

Category

DATA FILE SCH02132006  
CORE FACTOR 1

DATE EXTRACTED 02/24/86  
DATE INJECTED 03/06/86

ANALYST INSTRUMENT  
5100

VERIFIED BY LAK  
COMPOUNDS DETECTED 0

REFS SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
116	21A	2,4,6-trichlorophenol	ND	7A	58A	4-nitrophenol	ND
84	22A	4-chloro-3-methylphenol	ND	5A	59A	2,4-dinitrophenol	ND
16	24A	2-chlorophenol	ND	4A	60A	2-methyl-4,6-dinitrophenol	ND
2A	31A	2,4-dichlorophenol	ND	9A	64A	pentachlorophenol	ND
2A	34A	2,4-dimethylphenol	ND	10A	65A	phenol	ND
64	57A	2-nitrophenol	ND				

3 409

**SURROGATE RECOVERIES**

SCAN CODE	COMPOUND	RESULT
225 AS1	45-phenol	50%
222 AS2	2-Fluorophenol	40%
228 AS3	2,4-dichlorophenol	25%
AS1	4-phenol	

NOTES AND DEFINITIONS FOR THIS FORM

SCAN = scan number or test method used for chromatogram

ALL results reported in this table are not specified

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Results by Sample

LAB # 86-02-132

Continued From Above

SAMPLE ID Reagent Blank BNA H2O

FRACTION OEA

TEST CUBE M525 A

NAME Method 625 Acid Compounds

Date & Time Collected not specified

Category

ND = not detected at EPA detection limit method 625, (Federal Register, 11/26/84).

EL = detected in reagent blank, background subtraction not performed.

J = estimated value; less than method detection limit.

ZERO FACTOR indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Results by Sample

REPORT

LAB # 86-02-132

SAMPLE ID Reagent Blank BNA H2O

FRACTION 06A

TEST CODE M525 B

NAME Method 625 Base/Neutrals

Date & Time Collected not specified

Category

DATA FILE SC002122005			DATE EXTRACTED 02/24/86		ANALYST		MM		VERIFIED BY LAK	
COND FACTOR 1			DATE INJECTED 03/06/86		INSTRUMENT		5100		COMPOUNDS DETECTED 1	
UPDES	SCAN	EPA	COMPOUND	RESULT	NPDES	SCAN	EPA	COMPOUND	RESULT	
10	10		acenaphthene	ND	41B	61B		N-nitrosodimethylamine	ND	
40	50		benzidine	ND	43B	62B		N-nitrosodiphenylamine	ND	
400	80		1,2,4-trichlorobenzene	ND	42B	63B		N-nitrosodi-n-propylamine	ND	
300	90		hexachlorobenzene	ND	13B	66B		bis(2-ethylhexyl)phthalate	ND	
200	100		hexachloroethane	ND	15B	67B		butyl benzyl phthalate	ND	
110	100		bis(2-chloroethyl)ether	ND	26B	1205	68B	di-butyl phthalate	3	
100	200		2-chloronaphthalene	ND	29B	69B		di-n-octyl phthalate	ND	
200	250		1,2-dichlorobenzene	ND	24B	70B		diethyl phthalate	ND	
210	260		1,3-dichlorobenzene	ND	25B	71B		dimethyl phthalate	ND	
210	270		1,4-dichlorobenzene	ND	5B	72B		benzo(a)anthracene A	ND	
200	280		3,3'-dichlorobenzidine	ND	6B	73B		benzo(a)pyrene	ND	
270	350		2,4-dinitrotoluene	ND	7B	74B		benzo(b)fluoranthene *	ND	
200	350		2,5-dinitrotoluene	ND	9B	75B		benzo(k)fluoranthene *	ND	
290	370		1,2-diphenylhydrazine	ND	18B	76B		chrysene A	ND	
310	390		fluoranthene	ND	20B	77B		acenaphthylene	ND	
170	400		4-chlorophenyl benzyl ether	ND	20B	78B		anthracene B	ND	

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Results by Sample

REPORT

LAB # 86-02-132

Continued From Above

SAMPLE ID Reagent Blank BNA H2O

FRACTION 06A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected not specified

Category

14B	41B	4-bromophenyl phenyl ether	ND	8B	79B	benzo(ghi)perylene	ND
12B	42B	bis(2-chloroisopropyl)ether	ND	32B	80B	fluorene	ND
10B	43B	bis(2-chloroethoxy)methane	ND	44B	81B	phenanthrene B	ND
34B	52B	hexachlorobutadiene	ND	19B	82B	dibenzo(a,h)anthracene	ND
35B	53B	hexachlorocyclopentadiene	ND	37B	83B	indeno(1,2,3-cd)pyrene	ND
38B	54B	isophorone	ND	45B	84B	pyrene	ND
39B	55B	naphthalene	ND				
40B	56B	nitrobenzene	ND				

**SURROGATE RECOVERIES**

SCAN CODE	RESULT
<u>514</u> 851	d5-nitrobenzene 82%
<u>777</u> 252	2-fluorobiphenyl 84%
<u>1353</u> 253	d14-terphenyl 80%
BS4	d10-biphenyl

3 412

**NOTES AND DEFINITIONS FOR THIS REPORT**

SCAN = scan number or retention time on chromatogram  
 All results reported in ug/L unless otherwise specified  
 ND = not detected at EPA detection limit method 625, (Federal Register, 10/26/84)  
 \* = benzo(b)fluoranthene and benzo(k)fluoranthene correlate  
 A = benzo(a)anthracene and chrysene correlate to high concentrations



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Results by Sample

LAB # 86-02-132

Continued From Above

SAMPLE 10 Reagent Blank BNA H2O

FRACTION 06A

TEST CODE M625 B NAME Method 625 Base/Neutrals

Date & Time Collected not specified

Category

S = anthracene and phenanthrene co-elute in high concentrations.  
 BL = detected in reagent blank, background subtraction not performed.  
 J = estimated value, less than method detection limit.  
 CONC FACTOR indicates dilution of sample if greater than one (1). Minimum detection  
 limits should be multiplied by conc. factor.

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REPORT

Results by Sample

LAB # 86-02-132

SAMPLE ID Reagent Blank BNA H2O

FRACTION 06A

TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS

Date & time Collected not specified

Category

DATA FILE 50602132C06  
CONC. FACTOR

DATE EXTRACTED 02/24/86  
DATE INJECTED 03/06/86

ANALYST MM

VERIFIED BY LAK  
COMPOUNDS DETECTED 0

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1P	69P	aldrin	ND	2P	102P	alpha BHC	ND
10P	90P	dieldrin	ND	3P	103P	beta BHC	ND
6P	91P	chlordane	ND	4P	104P	gamma BHC	ND
7P	92P	4,4'-DDT	ND	5P	105P	delta BHC	ND
8P	93P	4,4'-DDE	ND	18P	106P	PCB-1242	ND
9P	94P	4,4'-DDD	ND	19P	107P	PCB-1254	ND
11P	95P	alpha endosulfan	ND	20P	108P	PCB-1221	ND
12P	96P	beta endosulfan	ND	21P	109P	PCB-1232	ND
14P	97P	endosulfan sulfate	ND	22P	110P	PCB-1248	ND
14P	98P	endrin	ND	23P	111P	PCB-1260	ND
15P	99P	endrin aldehyde	ND	24P	112P	PCB-1016	ND
16P	100P	heptachlor	ND	25P	113P	toxaphene	ND
17P	101P	heptachlor epoxide	ND				

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-132

Continued From Above

SAMPLE ID Reagent Blank BNA H2O

FRACTION 06A

TEST CODE MS 608

NAME Pesticides & PCBs by GC/MS

Date & Time Collected not specified

Category

NOTES AND DEFINITIONS FOR THIS REPORT:

SCAN = scan number on chromatogram.

All results reported in micrograms/liter unless otherwise specified.

ND = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).

INFORMATION  
CORPORATION

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Analytical Serv

REPORT

LAB # 86-02-132

NonReported Work

FRACTION AND TEST CODES FOR WORK NOT REPORTED ELSEWHERE

01B : DUP\_145  
02B : DUP\_145  
03B : DUP\_145  
04B : DUP\_145  
05B : DUP\_145

# MEMPHIS CORPORATION

PAGE 1

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Analytical Serv

REPORT

03/06/86 16:52:50

LAB # 86-02-138

REPORT Radian  
TO BL 4  
Austin

ATTEN Larry French  
CLIENT PLANT4  
COMPANY Plant 4  
FACILITY Carswell AFB (Gen. Dynamics)

SAMPLES 9

WORK ID groundwater  
TAKEN WJ,FS  
TRANS Fed Ex, WJ/FS  
TYPE

P.O. # 212-027-27-40  
INVOICE under separate cover

PREPARED Radian Analytical Services  
BY 8501 MoPac Blvd.  
P.O. Box 9748  
Austin, Texas 78766  
ATTEN  
PHONE (512) 454-4797

*Carl Soto*  
CERTIFIED BY

CONTACT CONOVER

Unknown compound eluting here.

Second column confirmation performed for EPA 601 -07, -08, -09, for EPA 602: -03, -06, -08. Unknown compound eluting at trans-1,2-dichloroethene on sample -08.

## Footnotes and Comments

\* Indicates a value less than 5 times the detection limit. Potential error for such low values ranges between 50 and 100%.

@ Indicates that spike recovery for this analysis on the specific matrix was not within acceptable limits indicating an interferent present.

## SAMPLE IDENTIFICATION

01	860181	
02	860182	
03	860183	
04	860184	
05	860185	
06	860186	
07	860187	
08	860188	
09	860189	

## Analytical Serv TEST CODES and NAMES used on this report

GC 601	EPA Method 601/GC
GC 602	EPA Method 602/GC

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Analytical Serv  
Results by Sample

LAB # 86-02-138

SAMPLE ID 860181

FRACTION 01A

TEST CODE GC 601

NAME EPA Method 601/GC

Date & Time Collected 02/20/86

Category

DATA FILE	DATE INJECTED	ANALYST	VERIFIED BY
CONC. FACTOR	02/24/86	INSTRUMENT	COMPOUNDS DETECTED
1			1

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
	Chloromethane	ND		Trichloroethene	ND
	Bromomethane	ND		Dibromochloromethane *	ND
	Vinyl Chloride	ND		1,1,2-Trichloroethane *	ND
	Chloroethane	ND		cis-1,3-Dichloropropene *	ND
1	Methylene Chloride	0.45		2-Chloroethylvinyl Ether	ND
	Trichlorofluoromethane	ND		Bromoform	ND
	1,1-Dichloroethene	ND		1,1,2,2-Tetrachloroethane #	ND
	1,1-Dichloroethane	ND		Tetrachloroethylene #	ND
	trans-1,2-Dichloroethene	ND		Chlorobenzene	ND
	Chloroform	ND		1,3-Dichlorobenzene	ND
	1,2-Dichloroethane	ND		1,2-Dichlorobenzene	ND
	1,1,1-Trichloroethane	ND		1,4-Dichlorobenzene	ND
	Carbon Tetrachloride	ND			
	Bromodichloromethane	ND			
	1,2-Dichloropropane	ND			
	trans-1,3-Dichloropropene	ND			

3 418

WATKINS  
CORPORATION

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-138

Continued From Above

SAMPLE ID 860181

FRACTION 01A TEST CODE GC 601 NAME EPA Method 601/GC

Date & Time Collected 02/20/86 Category \_\_\_\_\_

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

All results reported in ug/L unless otherwise specified.

ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79).

\*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.  
#1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

# CORPORATION

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-138

SAMPLE ID 860181

FRACTION 01C

TEST CODE GC 602

NAME EPA Method 602/GC

Date & Time Collected 02/20/86

Category

DATA FILE D DATE INJECTED 02/25/86 ANALYST RP VERIFIED BY MCL  
 CONC. FACTOR 1 INSTRUMENT d COMPOUNDS DETECTED 1

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
	Benzene	ND		1,4-Dichlorobenzene	ND
1	Toluene	0.97		1,3-Dichlorobenzene	ND
	Ethyl Benzene	ND		1,2-Dichlorobenzene	ND
	Chlorobenzene	ND			

3 420

## NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.  
 All results reported in ug/L unless otherwise specified.  
 ND = not detected at EPA detection limit method 602, (Federal Register, 12/3/79).



# ANALYTICAL CORPORATION

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-138

SAMPLE ID 860182

FRACTION 02A

TEST CODE GC 601

NAME EPA Method 601/GC

Date & Time Collected 02/20/86

Category

DATA FILE \_\_\_\_\_ G DATE INJECTED 02/24/86

CONC. FACTOR \_\_\_\_\_ 1

ANALYST \_\_\_\_\_

INSTRUMENT \_\_\_\_\_

VERIFIED BY MCL

COMPOUNDS DETECTED 1

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
—	Chloromethane	ND	—	Trichloroethene	ND
—	Bromomethane	ND	—	Dibromochloromethane *	ND
—	Vinyl Chloride	ND	—	1,1,2-Trichloroethane *	ND
—	Chloroethane	ND	—	cis-1,3-Dichloropropene *	ND
1	Methylene Chloride	0.40	—	2-Chloroethylvinyl Ether	ND
—	Trichlorofluoromethane	ND	—	Bromoform	ND
—	1,1-Dichloroethene	ND	—	1,1,2,2-Tetrachloroethane #	ND
—	1,1-Dichloroethane	ND	—	Tetrachloroethylene #	ND
—	trans-1,2-Dichloroethene	ND	—	Chlorobenzene	ND
—	Chloroform	ND	—	1,3-Dichlorobenzene	ND
—	1,2-Dichloroethane	ND	—	1,2-Dichlorobenzene	ND
—	1,1,1-Trichloroethane	ND	—	1,4-Dichlorobenzene	ND
—	Carbon Tetrachloride	ND			
—	Bromodichloromethane	ND			
—	1,2-Dichloropropane	ND			
—	trans-1,3-Dichloropropene	ND			

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-138

Continued From Above

SAMPLE ID 860182

FRACTION 02A TEST CODE GC 601 NAME EPA Method 601/GC

Date & Time Collected 02/20/86

Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.  
All results reported in ug/L unless otherwise specified.  
ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79).  
\*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.  
#1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

# ANALYTICAL CORPORATION

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-138

SAMPLE ID 860182

FRACTION 02C

TEST CODE GC 602

NAME EPA Method 602/GC

Date & Time Collected 02/20/86

Category

DATA FILE \_\_\_\_\_ D \_\_\_\_\_ DATE INJECTED 02/25/86 ANALYST \_\_\_\_\_ RP \_\_\_\_\_ VERIFIED BY MCL  
 CONC. FACTOR \_\_\_\_\_ 1 \_\_\_\_\_ INSTRUMENT \_\_\_\_\_ d \_\_\_\_\_ COMPOUNDS DETECTED \_\_\_\_\_ 0

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
_____	Benzene	ND ;	_____	1,4-Dichlorobenzene	ND
_____	Toluene	ND ;	_____	1,3-Dichlorobenzene	ND
_____	Ethyl Benzene	ND ;	_____	1,2-Dichlorobenzene	ND
_____	Chlorobenzene	ND ;			

3 423

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

All results reported in \_\_\_\_\_ ug/L unless otherwise specified.

ND = not detected at EPA detection limit method 602, (Federal Register, 12/3/79).

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Analytical Serv  
Results by Sample

LAB # 86-02-138

SAMPLE ID 860183

FRACTION 03A  
Date & Time Collected 02/20/86

TEST CODE GC 601 NAME EPA Method 601/GC  
Category

DATA FILE		G		DATE INJECTED		02/24/86		ANALYST		RP		VERIFIED BY MCL	
CONC. FACTOR								INSTRUMENT		g		COMPOUNDS DETECTED 1	
SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT								
	Chloromethane	ND		Trichloroethene	ND								
	Bromomethane	ND		Dibromochloromethane *	ND								
	Vinyl Chloride	ND		1,1,2-Trichloroethane *	ND								
	Chloroethane	ND		cis-1,3-Dichloropropene *	ND								
1	Methylene Chloride	0.65		2-Chloroethylvinyl Ether	ND								
	Trichlorofluoromethane	ND		Bromoform	ND								
	1,1-Dichloroethene	ND		1,1,2,2-Tetrachloroethane #	ND								
	1,1-Dichloroethane	ND		Tetrachloroethylene #	ND								
	trans-1,2-Dichloroethene	ND		Chlorobenzene	ND								
	Chloroform	ND		1,3-Dichlorobenzene	ND								
	1,2-Dichloroethane	ND		1,2-Dichlorobenzene	ND								
	1,1,1-Trichloroethane	ND		1,4-Dichlorobenzene	ND								
	Carbon Tetrachloride	ND											
	Bromodichloromethane	ND											
	1,2-Dichloropropane	ND											
	trans-1,3-Dichloropropene	ND											

3 424

**ANALYTICAL CORPORATION**

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SAMPLE ID 860183

Analytical Serv  
Results by Sample

REPORT  
LAB # 86-02-138  
Continued From Above

FRACTION 03A TEST CODE GC 601 NAME EPA Method 601/GC  
Date & Time Collected 02/20/86 Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.  
All results reported in ug/L unless otherwise specified.  
ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79).  
\*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.  
#1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

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Analytical Serv  
Results by Sample

LAB # 86-02-138

SAMPLE ID 860183

FRACTION 03C TEST CODE GC 602 NAME EPA Method 602/GC  
Date & Time Collected 02/20/86

Category

DATA FILE : \_\_\_\_\_ D DATE INJECTED 02/26/86 ANALYST \_\_\_\_\_ MCL \_\_\_\_\_ VERIFIED BY MCL  
CONC. FACTOR : \_\_\_\_\_ 1 INSTRUMENT \_\_\_\_\_ d COMPOUNDS DETECTED 1

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
—	Benzene	ND :	—	1,4-Dichlorobenzene	ND
1	Toluene	11.8 :	—	1,3-Dichlorobenzene	ND
—	Ethyl Benzene	ND :	—	1,2-Dichlorobenzene	ND
—	Chlorobenzene	ND :	—		

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.  
All results reported in \_\_\_\_\_ ug/L unless otherwise specified.  
ND = not detected at EPA detection limit method 602, (Federal Register, 12/3/79).

# LABORATORY

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Analytical Serv  
Results by Sample

LAB # 86-02-138

SAMPLE ID 860184

FRACTION 04A

TEST CODE GC 601 NAME EPA Method 601/GC

Date & Time Collected 02/20/86

Category

DATA FILE	G	DATE INJECTED	02/24/86	ANALYST	RP	VERIFIED BY	MCL
CONC. FACTOR	1			INSTRUMENT	g	COMPOUNDS DETECTED	1
SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT		
	Chloromethane	ND		Trichloroethene	ND		
	Bromomethane	ND		Dibromochloromethane *	ND		
	Vinyl Chloride	ND		1,1,2-Trichloroethane *	ND		
	Chloroethane	ND		cis-1,3-Dichloropropene *	ND		
1	Methylene Chloride	0.57		2-Chloroethylvinyl Ether	ND		
	Trichlorofluoromethane	ND		Bromoform	ND		
	1,1-Dichloroethene	ND		1,1,2,2-Tetrachloroethane #	ND		
	1,1-Dichloroethane	ND		Tetrachloroethylene #	ND		
	trans-1,2-Dichloroethene	ND		Chlorobenzene	ND		
	Chloroform	ND		1,3-Dichlorobenzene	ND		
	1,2-Dichloroethane	ND		1,2-Dichlorobenzene	ND		
	1,1,1-Trichloroethane	ND		1,4-Dichlorobenzene	ND		
	Carbon Tetrachloride	ND					
	Bromodichloromethane	ND					
	1,2-Dichloropropane	ND					
	trans-1,3-Dichloropropene	ND					

3 427

ENVIRONMENTAL  
CORPORATION

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-138

Continued From Above

SAMPLE ID 860184

FRACTION 04A

TEST CODE GC 601

NAME EPA Method 601/GC

Date & Time Collected 02/20/86

Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

All results reported in ug/L unless otherwise specified.

ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79).

\*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.

#1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.



# CORPORATION

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Analytical Serv  
Results by Sample

LAB # 86-02-138

SAMPLE ID 860184

FRACTION 04C TEST CODE GC 602 NAME EPA Method 602/GC  
Date & time Collected 02/20/86 Category

DATA FILE \_\_\_\_\_ D \_\_\_\_\_ DATE INJECTED 02/26/86 ANALYST \_\_\_\_\_ RP \_\_\_\_\_ VERIFIED BY MCL  
CONC. FACTOR \_\_\_\_\_ 1 \_\_\_\_\_ INSTRUMENT \_\_\_\_\_ d \_\_\_\_\_ COMPOUNDS DETECTED 1

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
—	Benzene	ND	—	1,4-Dichlorobenzene	ND
3 429	Toluene	0.56	—	1,3-Dichlorobenzene	ND
—	Ethyl Benzene	ND	—	1,2-Dichlorobenzene	ND
—	Chlorobenzene	ND	—		

## NOTES AND DEFINITIONS FOR THIS REPORT

SCAN = scan number or retention time on chromatogram.  
All results reported in ug/L unless otherwise specified.  
ND = not detected at EPA detection limit method 602, (Federal Register, 12/9/79).

# LABORATORY CORPORATION

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Analytical Serv  
Results by Sample

LAB # 86-02-138

SAMPLE ID 860185

FRACTION 05A

TEST CODE GC 601

NAME EPA Method 601/GC

Date & Time Collected 02/20/86

Category

DATA FILE	G	DATE INJECTED	02/24/86	ANALYST	RP	VERIFIED BY	MCL
CONC. FACTOR	1			INSTRUMENT	g	COMPOUNDS DETECTED	0
SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT		
	Chloromethane	ND		Trichloroethene	ND		
	Bromomethane	ND		Dibromochloromethane *	ND		
	Vinyl Chloride	ND		1,1,2-Trichloroethane *	ND		
	Chloroethane	ND		cis-1,3-Dichloropropene *	ND		
	Methylene Chloride	ND		2-Chloroethylvinyl Ether	ND		
	Trichlorofluoromethane	ND		Bromoform	ND		
	1,1-Dichloroethene	ND		1,1,2,2-Tetrachloroethane #	ND		
	1,1-Dichloroethane	ND		Tetrachloroethylene #	ND		
	trans-1,2-Dichloroethene	ND		Chlorobenzene	ND		
	Chloroform	ND		1,3-Dichlorobenzene	ND		
	1,2-Dichloroethane	ND		1,2-Dichlorobenzene	ND		
	1,1,1-Trichloroethane	ND		1,4-Dichlorobenzene	ND		
	Carbon Tetrachloride	ND					
	Bromodichloromethane	ND					
	1,2-Dichloropropane	ND					
	trans-1,3-Dichloropropene	ND					

CORPORATION

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-138

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SAMPLE ID 860185

FRACTION 05A TEST CODE GC 601 NAME EPA Method 601/GC

Date & Time Collected 02/20/86

Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

All results reported in ug/L unless otherwise specified.

ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79).

\*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.

#1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

# WATKINS CORPORATION

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-138

SAMPLE ID 860185

FRACTION 05C

TEST CODE GC 602

NAME EPA Method 602/GC

Date & Time Collected 02/20/86

Category

DATA FILE - D  
CONC. FACTOR - 1

DATE INJECTED 02/26/86

ANALYST  
INSTRUMENT

RP

VERIFIED BY MCL  
COMPOUNDS DETECTED 0

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
—	Benzene	ND	—	1,4-Dichlorobenzene	ND
—	Toluene	ND	—	1,3-Dichlorobenzene	ND
—	Ethyl Benzene	ND	—	1,2-Dichlorobenzene	ND
—	Chlorobenzene	ND	—		

3 432

## NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.  
All results reported in ug/l unless otherwise specified.  
ND = not detected at EPA detection limit method 602, (Federal Register, 12/3/79).

# ANALYTICAL SERVICES CORPORATION

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-138

SAMPLE ID 860186

FRACTION 06A

TEST CODE GC 601

NAME EPA Method 601/GC

Date & Time Collected 02/21/86

Category

DATA FILE	DATE INJECTED	ANALYST	RP	VERIFIED BY	MCL
CONC. FACTOR 1	02/24/86	INSTRUMENT	9	COMPOUNDS DETECTED	3
SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
	Chloromethane	ND	3	Trichloroethene	0.75
	Bromomethane	ND		Dibromochloromethane *	ND
1	Vinyl Chloride	0.80		1,1,2-Trichloroethane *	ND
	Chloroethane	ND		cis-1,3-Dichloropropene *	ND
	Methylene Chloride	ND		2-Chloroethylvinyl Ether	ND
	Trichlorofluoromethane	ND		Bromoform	ND
	1,1-Dichloroethene	ND		1,1,2,2-Tetrachloroethane #	ND
	1,1-Dichloroethane	ND		Tetrachloroethylene #	ND
2	trans-1,2-Dichloroethene	4.20		Chlorobenzene	ND
	Chloroform	ND		1,3-Dichlorobenzene	ND
	1,2-Dichloroethane	ND		1,2-Dichlorobenzene	ND
	1,1,1-Trichloroethane	ND		1,4-Dichlorobenzene	ND
	Carbon Tetrachloride	ND			
	Bromodichloromethane	ND			
	1,2-Dichloropropane	ND			
	trans-1,3-Dichloropropene	ND			

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**ENVIRONMENTAL  
CORPORATION**

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Analytical Serv

REPORT

LAB # 86-02-138

Results by Sample

Continued From Above

SAMPLE ID 860186

FRACTION 06A

TEST CODE GC 601

NAME EPA Method 601/GC

Date & Time Collected 02/21/86

Category

**NOTES AND DEFINITIONS FOR THIS REPORT.**

SCAN = scan number or retention time on chromatogram.

All results reported in ug/L unless otherwise specified.

ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79).

\*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.

#1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

**ENVIRONMENTAL  
CORPORATION**

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Analytical Serv REPORT

RECEIVED: 02/21/86

Results by Sample

SAMPLE ID 860186

FRACTION 06C

TEST CODE GC 602 NAME EPA Method 602/GC

Date & Time Collected 02/21/86

Category

DATA FILE \_\_\_\_\_ D \_\_\_\_\_ DATE INJECTED 02/26/86 ANALYST \_\_\_\_\_ RP \_\_\_\_\_ VERIFIED BY MCL  
CONC. FACTOR \_\_\_\_\_ 10 \_\_\_\_\_ INSTRUMENT \_\_\_\_\_ d \_\_\_\_\_ COMPOUNDS DETECTED 1

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
1	Benzene	106		1,4-Dichlorobenzene	ND
	Toluene	ND		1,3-Dichlorobenzene	ND
	Ethyl Benzene	ND		1,2-Dichlorobenzene	ND
	Chlorobenzene	ND			

3 435

**NOTES AND DEFINITIONS FOR THIS REPORT.**

SCAN = scan number or retention time on chromatogram.

All results reported in \_\_\_\_\_ ug/L unless otherwise specified.

ND = not detected at EPA detection limit method 602, (Federal Register, 12/3/79).

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-138

SAMPLE ID 860187

FRACTION 07A

TEST CODE GC 601

NAME EPA Method 601/GC

Date & Time Collected 02/21/86

Category

DATA FILE

G

DATE INJECTED 02/24/86

ANALYST

RP

VERIFIED BY MCL

CONC. FACTOR

1

INSTRUMENT

q

COMPOUNDS DETECTED 5

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
1	Chloromethane	ND	3	Trichloroethene	3.15
2	Bromomethane	ND		Dibromochloromethane *	ND
	Vinyl Chloride	ND		1,1,2-Trichloroethane *	ND
	Chloroethane	ND		cis-1,3-Dichloropropene *	ND
	Methylene Chloride	0.63		2-Chloroethylvinyl Ether	ND
	Trichlorofluoromethane	19.2		Bromoform	ND
	1,1-Dichloroethene	ND	4	1,1,2,2-Tetrachloroethane #	0.18
	1,1-Dichloroethane	ND		Tetrachloroethylene #	ND
3	trans-1,2-Dichloroethene	0.72		Chlorobenzene	ND
	Chloroform	ND		1,3-Dichlorobenzene	ND
	1,2-Dichloroethane	ND		1,2-Dichlorobenzene	ND
	1,1,1-Trichloroethane	ND		1,4-Dichlorobenzene	ND
	Carbon Tetrachloride	ND			
	Bromodichloromethane	ND			
	1,2-Dichloropropane	ND			
	trans-1,3-Dichloropropene	ND			



**ANALYTICAL CORPORATION**

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-138

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SAMPLE ID 860187

FRACTION 07A TEST CODE GC 601 NAME EPA Method 601/GC

Date & Time Collected 02/21/86

Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

All results reported in ug/L unless otherwise specified.

ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79).

\*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.  
#1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

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Analytical Serv  
Results by Sample

LAB # 86-02-138

SAMPLE ID 860187

FRACTION 07C

TEST CODE GC 602

NAME EPA Method 602/GC

Date & Time Collected 02/21/86

Category

DATA FILE \_\_\_\_\_ D  
CONC. FACTOR \_\_\_\_\_ 1

DATE INJECTED 02/26/86

ANALYST \_\_\_\_\_  
INSTRUMENT \_\_\_\_\_

RP \_\_\_\_\_  
VERIFIED BY MCL  
COMPOUNDS DETECTED \_\_\_\_\_

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
_____	Benzene	ND ;	_____	1,4-Dichlorobenzene	ND
_____	Toluene	ND ;	_____	1,3-Dichlorobenzene	ND
_____	Ethyl Benzene	ND ;	_____	1,2-Dichlorobenzene	ND
_____	Chlorobenzene	ND ;			

3 438

NOTES AND DEFINITIONS FOR THIS REPORT

SCAN = scan number or retention time on chromatogram.

All results reported in \_\_\_\_\_ ug/l, unless otherwise specified.

ND = not detected at EPA detection limit method 602, (Federal Register, 12/3/79).

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-138

SAMPLE ID 860188

FRACTION 08A

TEST CODE GC 601

NAME EPA Method 601/GC

Date & Time Collected 02/21/86

Category

DATA FILE \_\_\_\_\_ G DATE INJECTED 02/25/86  
CONC. FACTOR 10000

ANALYST \_\_\_\_\_ MCL \_\_\_\_\_  
INSTRUMENT \_\_\_\_\_ g COMPOUNDS DETECTED 6

VERIFIED BY MCL

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
_____	Chloromethane	ND	4	Trichloroethene	447028
_____	Bromomethane	ND	_____	Dibromochloromethane *	ND
_____	Vinyl Chloride	ND	_____	1,1,2-Trichloroethane *	ND
_____	Chloroethane	ND	_____	cis-1,3-Dichloropropene *	ND
1	Methylene Chloride	156503	_____	2-Chloroethylvinyl Ether	ND
_____	Trichlorofluoromethane	ND	_____	Bromoform	ND
_____	1,1-Dichloroethene	ND	_____	1,1,2,2-Tetrachloroethane #	ND
_____	1,1-Dichloroethane	ND	5	Tetrachloroethylene #	19409
2	trans-1,2-Dichloroethene	117852	_____	Chlorobenzene	ND
_____	Chloroform	ND	_____	1,3-Dichlorobenzene	ND
3	1,2-Dichloroethane	24124	6	1,2-Dichlorobenzene	298245
_____	1,1,1-Trichloroethane	ND	_____	1,4-Dichlorobenzene	ND
_____	Carbon Tetrachloride	ND	_____		
_____	Bromodichloromethane	ND	_____		
_____	1,2-Dichloropropane	ND	_____		
_____	trans-1,3-Dichloropropene	ND	_____		

**ANALYTICAL CORPORATION**

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-138

Continued From Above

SAMPLE ID 860188

FRACTION 08A

TEST CODE GC 601 NAME EPA Method 601/GC

Date & Time Collected 02/21/86

Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

All results reported in ug/L unless otherwise specified.

ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79).

\*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.

#1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-138

SAMPLE ID 860188

FRACTION OBC

TEST CODE GC 602

NAME EPA Method 602/GC

Date & Time Collected 02/21/86

Category

DATA FILE D DATE INJECTED 02/27/86 ANALYST MCL VERIFIED BY MCL  
 CONC. FACTOR 20000 INSTRUMENT d COMPOUNDS DETECTED 2

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
—	Benzene	ND :	—	1,4-Dichlorobenzene	ND
—1	Toluene	0.6% :	—	1,3-Dichlorobenzene	ND
—	Ethyl Benzene	ND :	—2	1,2-Dichlorobenzene	596014
—	Chlorobenzene	ND :	—		

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

All results reported in ug/L unless otherwise specified.

ND = not detected at EPA detection limit method 602, (Federal Register, 12/3/79).

# WATKINS CORPORATION

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Analytical Serv  
Results by Sample

LAB # 86-02-138

SAMPLE ID 860189

FRACTION 09A

TEST CODE GC 601 NAME EPA Method 601/GC

Date & Time Collected 02/21/86

Category

DATA FILE	CONC. FACTOR	G	DATE INJECTED	02/25/86	ANALYST INSTRUMENT	RP	VERIFIED BY MCL	COMPOUNDS DETECTED	1
SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT				
	Chloromethane	ND	1	Trichloroethene	5585				
	Bromomethane	ND		Dibromochloromethane *	ND				
	Vinyl Chloride	ND		1,1,2-Trichloroethane *	ND				
	Chloroethane	ND		cis-1,3-Dichloropropene *	ND				
	Methylene Chloride	ND		2-Chloroethylvinyl Ether	ND				
	Trichlorofluoromethane	ND		Bromoform	ND				
	1,1-Dichloroethene	ND		1,1,2,2-Tetrachloroethane #	ND				
	1,1-Dichloroethane	ND		Tetrachloroethylene #	ND				
	trans-1,2-Dichloroethene	ND		Chlorobenzene	ND				
	Chloroform	ND		1,3-Dichlorobenzene	ND				
	1,2-Dichloroethane	ND		1,2-Dichlorobenzene	ND				
	1,1,1-Trichloroethane	ND		1,4-Dichlorobenzene	ND				
	Carbon Tetrachloride	ND							
	Bromodichloromethane	ND							
	1,2-Dichloropropane	ND							
	trans-1,3-Dichloropropene	ND							

CORPORATION

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-138

Continued From Above

SAMPLE ID 860189

FRACTION 09A

TEST CODE GC 601

NAME EPA Method 601/GC

Date & Time Collected 02/21/86

Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

All results reported in ug/L unless otherwise specified.

ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79).

\*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.

#1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

**WATKINS CORPORATION**

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-138

SAMPLE ID 860189

FRACTION 09C

TEST CODE GC 602

NAME EPA Method 602/GC

Date & Time Collected 02/21/86

Category

DATA FILE - 10 D DATE INJECTED 02/27/86 ANALYST            MCL            VERIFIED BY MCL  
CONC. FACTOR - 10 INSTRUMENT            d COMPOUNDS DETECTED 0

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
---	Benzene	ND	---	1,4-Dichlorobenzene	ND
---	Toluene	ND	---	1,3-Dichlorobenzene	ND
---	Ethyl Benzene	ND	---	1,2-Dichlorobenzene	ND
---	Chlorobenzene	ND			

3 444

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.  
All results reported in          ug/L unless otherwise specified.  
ND = not detected at EPA detection limit method 602, (Federal Register, 12/3/79).



# CORPORATION

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Analytical Serv

REPORT

LAB # 86-02-138

RECEIVED: 02/21/86

NonReported Work

## FRACTION AND TEST CODES FOR WORK NOT REPORTED ELSEWHERE

01B	:	DUP601	01D	:	DUP602
02B	:	DUP601	02D	:	DUP602
03B	:	DUP601	03D	:	DUP602
04B	:	DUP601	04D	:	DUP602
05B	:	DUP601	05D	:	DUP602
06B	:	DUP601	06D	:	DUP602
07B	:	DUP601	07D	:	DUP602
08B	:	DUP601	08D	:	DUP602
09B	:	DUP601	09D	:	DUP602

# CORPORATION

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Analytical Serv

REPORT

LAB # 86-02-139

04/01/86 17:42:41

REPORT Radian

TO B1 4

Austin

ATTEN Larry French

CLIENT PLANT 4

COMPANY Plant 4

FACILITY Carswell AFB (Gen. Dynamics)

SAMPLES 8

WORK ID groundwater

TAKEN WJ, FS

TRANS Fed Ex, WJ/FS

TYPE

P.O. # 212-027-27-40

INVOICE under separate cover

PREPARED Radian Analytical Services

BY 8501 Mopac Blvd

P.O. Box 9948

Austin, Texas 78766

ATTEN

PHONE (512) 454-4797

CONTACT CONOVER

*Jerry K. McCall*  
CERTIFIED BY

## Footnotes and Comments

\* Indicates a value less than 5 times the detection limit.  
Potential error for such low values ranges between  
50 and 100%.

@ Indicates that spike recovery for this analysis on the  
specific matrix was not within acceptable limits indicating  
an interferent present.

## SAMPLE IDENTIFICATION

01	860181
02	860182
03	860183
04	860184
05	860185
06	860186
07	860187
08	860189

## Analytical Serv TEST CODES and NAMES used on this report

AG E	Silver, ICPE
AS GA	Arsenic, low level
BA E	Barium, ICPE
CD E	Cadmium, ICPE
CR E	Chromium, ICPE
DG3020	Digestion by Method 3020
DG6010	Digestion by Method 6010
HC IR	Hydrocarbons
HG CA	Mercury, Cold Vapor
ONG IR	Oil and Grease, Infrared
PB CA	Lead, low level
SE GA	Selenium, low level

# CORPORATION

PAGE 2  
 RECEIVED: 02/21/86  
 Analytical Serv  
 REPORT  
 RESULTS BY TEST  
 LAB # 86-02-139

TEST CODE	Sample 01 (entered units)	Sample 02 (entered units)	Sample 03 (entered units)	Sample 04 (entered units)	Sample 05 (entered units)
AG_E ug/ml	0.019	0.011	0.003*	0.010	0.017
AS_GA ug/ml	0.015	0.004*	<.003	0.004*	0.047
BA_E ug/ml	0.32	0.067	0.066	0.13	0.48
CD_E ug/ml	<.002	<.002	<.002	<.002	<.002
CR_E ug/ml	0.054	0.028	0.069	0.025	0.093
DC3020 date complete	03/06/86	03/06/86	03/06/86	03/06/86	03/06/86
DG6010 date complete	02/28/86	02/28/86	02/28/86	02/28/86	02/28/86
HG_CA ug/ml	<.0002	<.0002	<.0002	<.0002	<.0002
PB_GA ug/ml	0.014	0.031	0.038	0.035	0.070
SE_GA ug/ml	<.003	<.003	<.003e	<.003	<.003

3 447

TEST CODE	Sample 06 (entered units)	Sample 07 (entered units)	Sample 08 (entered units)
AG_E ug/ml	0.012	0.011	0.012
AS_GA ug/ml	0.011*	<.003	<.003

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Analytical Serv

REPORT

RESULTS BY TEST

LAB # 86-02-139

CONTINUED FROM ABOVE

BA_E	0.48	0.054	0.10
ug/ml			
CD_E	<.002	<.002	<.002
ug/ml			
CR_E	0.020*	0.032	0.14
ug/ml			
DG3020	03/06/86	03/06/86	03/06/86
date complete			
DG5010	02/28/86	02/28/86	02/28/86
date complete			
HC_IR	<1	<1	<1
mg/L			
HG_CA	<.0002	<.0002	<.0002
ug/ml			
ONG_IR		<1	<1
mg/L			
PB_CA	0.007	0.045	<.001
ug/ml			
SE_CA	<.003	<.003	<.003
ug/ml			

LABORATORY  
CORPORATION

PAGE 4

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Analytical Serv

REPORT

NonReported Work

LAB # 86-02-139

FRACTION AND TEST CODES FOR WORK NOT REPORTED ELSEWHERE

06B : DUP\_NS

PAGE 1

RECEIVED: 02/25/86

Analytical Serv

REPORT

LAB # 86-02-152

03/31/86 10:27:27

REPORT Radian Corporation

TO Larry French

Austin, Texas

PREPARED Radian Analytical Services

BY 8501 MoPac Blvd.

P.O. Box 9948

Austin, Texas 78766

ATTEN

ATTEN

PHONE (512) 454-4797

CONTACT FRENCH

CLIENT PLANT 4 SAMPLES 8

COMPANY General Dynamics

FACILITY GEHL Plant 4, Bldg 4

Austin, Texas

WORK ID General Dynamics Plant 4

TAKEN 2/19 and 21/86

TRANS Fed Ex 736743935

TYPE H2O

P.O. # 212-027-27-40

INVOICE under separate cover

Footnotes and Comments

\* Indicates a value less than 5 times the detection limit.  
Potential error for such low values ranges between  
50 and 100%.

@ Indicates that spike recovery for this analysis on the  
specific matrix was not within acceptable limits indicating  
an interferent present.

SAMPLE IDENTIFICATION

01	860179	VOA H2O
02	860186	VOA H2O
03	860186	H2O
04	860183	H2O
05	860189	H2O
06	860187	H2O-DUP ANAL.
06	860187	H2O-MATRIX SPIKE
06	Reagent Blank	625
07	Reagent Blank	624
08	Method Spike	-625

Analytical Serv TEST CODES and NAMES used on this report

EX 625	Extraction only - 625 BN/A
IFB VS	VOA Screen by IFB method
M625 A	Method 625 Acid Compounds
M625 B	Method 625 Base/Neutrals
MS 608	Pesticides & PCBs by GC/MS
MS 624	EPA Method 624/GC-MS

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Analytical Serv  
RESULTS BY TEST

REPORT  
LAB # 86-02-152

TEST CODE	Sample 01	Sample 02	Sample 03	Sample 04	Sample 05
default units	(entered units)	(entered units)	(entered units)	(entered units)	(entered units)
EX_625					
date complete					
IFB_VS	02/25/86	02/25/86	02/25/86	02/25/86	02/25/86
date complete					

TEST CODE	Sample 06
default units	(entered units)
EX_625	
date complete	
	02/25/86
	02/25/86
	02/25/86

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RECEIVED: 02/25/86

Analytical Serv

Results by Sample

REPORT

LAB # 86-02-152

SAMPLE ID 860179 VDA H2O

FRACTION 01A

TEST CODE MS 624

NAME EPA Method 624/GC-MS

Date & Time Collected 02/19/86

Category

DATA FILE 4CU02152V01

DATE INJECTED 03/04/86

ANALYST

REM

VERIFIED BY LAK

CONC. FACTOR 10

10

INSTRUMENT

F4

COMPOUNDS DETECTED 1

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
3V	4V	benzene	ND	17V	32V	1,2-dichloropropane	ND
6V	6V	carbon tetrachloride	ND	18V	33V	cis-1,3-dichloropropylene	ND
7V	7V	chlorobenzene	ND	18V	33V	trans-1,3-dichloropropylene	ND
15V	10V	1,2-dichloroethane	ND	19V	38V	ethylbenzene	ND
27V	11V	1,1,1-trichloroethane	ND	22V	44V	methylene chloride	ND
14V	13V	1,1-dichloroethane	ND	21V	45V	methyl chloride	ND
28V	14V	1,1,2-trichloroethane	ND	20V	46V	methyl bromide	ND
23V	15V	1,1,2,2-tetrachloroethane	ND	5V	47V	bromoform	ND
9V	16V	chloroethane	ND	12V	48V	dichlorobromomethane	ND
10V	19V	2-chloroethylvinyl ether	ND	30V	49V	trichlorofluoromethane	ND
11V	23V	chloroform	ND	8V	51V	chlorodibromomethane	ND
16V	29V	1,1-dichloroethylene	ND	24V	270	tetrachloroethylene	6500
26V	30V	1,2-trans-dichloroethylene	ND	25V	86V	toluene	ND
				29V	87V	trichloroethylene	ND
				31V	88V	vinyl chloride	ND



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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-152

Continued From Above

SAMPLE ID 860179 VOA H20

FRACTION 01A TEST CODE MS 624 NAME EPA Method 624/GC-MS

Date & Time Collected 02/19/86

Category

SURROGATE RECOVERIES

SCAN CODE	COMPOUND	RESULT
<u>198</u> VS1	d4-1,2-dichloroethane	<u>116</u>
<u>377</u> VS2	d8-toluene	<u>96</u>
<u>466</u> VS3	bromofluorobenzene	<u>105</u>

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.  
 All results reported in ug/l unless otherwise specified.  
 ND = not detected at EPA detection limit method 624, (Federal Register, 10/26/84).  
 BL = detected in reagent blank; background subtraction not performed.  
 J = estimated value; less than method detection limit.  
 CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-152

SAMPLE ID 860186 VOA H20

FRACTION 02A

TEST CODE MS 624

NAME EPA Method 624/GC-MS

Date & Time Collected 02/21/86

Category

DATA FILE 4CU02152V02  
CONC. FACTOR 1

DATE INJECTED 03/04/86

ANALYST INSTRUMENT

REM F4

VERIFIED BY LAK  
COMPOUNDS DETECTED 2

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
3V 278	4V	benzene	35	17V	32V	1,2-dichloropropane	ND
6V	6V	carbon tetrachloride	ND	18V	33V	cis-1,3-dichloropropylene	ND
7V	7V	chlorobenzene	ND	18V	33V	trans-1,3-dichloropropylene	ND
15V	10V	1,2-dichloroethane	ND	19V	38V	ethylbenzene	ND
27V	11V	1,1,1-trichloroethane	ND	22V	44V	methylene chloride	ND
14V	13V	1,1-dichloroethane	ND	21V	45V	methyl chloride	ND
28V	14V	1,1,2-trichloroethane	ND	20V	46V	methyl bromide	ND
23V	15V	1,1,2,2-tetrachloroethane	ND	5V	47V	bromoform	ND
9V	16V	chloroethane	ND	12V	48V	dichlorobromomethane	ND
10V	19V	2-chloroethylvinyl ether	ND	30V	49V	trichlorofluoromethane	ND
11V	23V	chloroform	ND	8V	51V	chlorodibromomethane	ND
16V	29V	1,1-dichloroethylene	ND	24V	85V	tetrachloroethylene	ND
26V 179	30V	1,2-trans-dichloroethylene	4	25V	86V	toluene	ND
				29V	87V	trichloroethylene	ND
				31V	88V	vinyl chloride	ND

**WATKINS CORPORATION**

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-152

Continued From Above

SAMPLE ID 860186 VOA H20

FRACTION 02A

TEST CODE MS 624

NAME EPA Method 624/GC-MS

Date & Time Collected 02/21/86

Category           

**SURROGATE RECOVERIES**

SCAN CODE	COMPOUND	RESULT
<u>199</u> VS1	d4-1,2-dichloroethane	<u>106</u>
<u>377</u> VS2	d8-toluene	<u>100</u>
<u>466</u> VS3	bromofluorobenzene	<u>108</u>

**NOTES AND DEFINITIONS FOR THIS REPORT.**

SCAN = scan number or retention time on chromatogram.  
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 ND = not detected at EPA detection limit method 624, (Federal Register, 10/26/84).  
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 J = estimated value; less than method detection limit.  
 CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-152

SAMPLE ID 860186 H20

FRACTION 03A

TEST CODE M625 A

NAME Method 625 Acid Compounds

Date & Time Collected 02/21/86

Category

DATA FILE 5CU02152C03

DATE EXTRACTED 02/25/86

ANALYST

MM

VERIFIED BY LAK

CONC. FACTOR 1

DATE INJECTED 03/10/86

INSTRUMENT

5100

COMPOUNDS DETECTED 1

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
11A	21A	2,4,6-trichlorophenol	ND	7A	58A	4-nitrophenol	ND
8A	22A	4-chloro-3-methylphenol	ND	5A	59A	2,4-dinitrophenol	ND
1A	24A	2-chlorophenol	ND	4A	60A	2-methyl-4,6-dinitrophenol	ND
2A	31A	2,4-dichlorophenol	ND	9A	64A	pentachlorophenol	ND
3A	34A	2,4-dimethylphenol	ND	10A	392	phenol	9
6A	57A	2-nitrophenol	ND				

SURROGATE RECOVERIES

SCAN CODE	COMPOUND	RESULT
370 AS1	d5-phenol	87
286 AS2	2-fluorophenol	80
987 AS3	2,4,6-tribromophenol	148
AS4	d3-phenol	

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

All results reported in ug/l unless otherwise specified.

WATKINS CORPORATION

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RECEIVED: 02/25/86

Analytical Serv

REPORT

Results by Sample

LAB # 86-02-152

Continued From Above

SAMPLE ID 860186 H20

FRACTION 03A

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected 02/21/86

Category

NO = not detected at EPA detection limit method 625, (Federal Register, 11/26/84).

BL = detected in reagent blank; background subtraction not performed.

J = estimated value; less than method detection limit.

CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

# CORPORATION

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RECEIVED: 02/25/86

Analytical Serv

REPORT

Results by Sample

LAB # 86-02-152

SAMPLE ID 860186 H20

FRACTION 03A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/21/86

Category

DATA FILE 5CU02152C03

DATE EXTRACTED 02/25/86

ANALYST

MM

VERIFIED BY LAK

CONC. FACTOR 1

DATE INJECTED 03/10/86

INSTRUMENT

5100

COMPOUNDS DETECTED 3

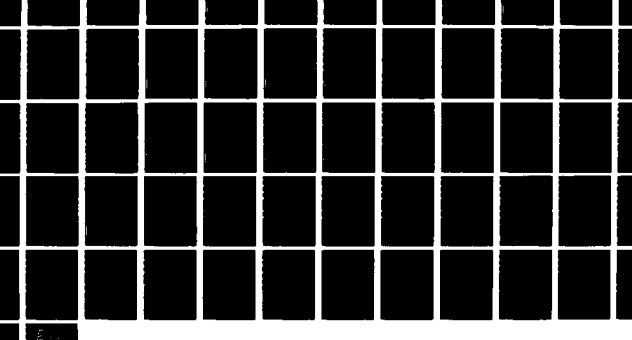
NPDES SCAN	EPA	COMPOUND	R-SULT	NPDES SCAN	EPA	COMPOUND	RESULT
1B	1B	acenaphthene	ND	41B	61B	N-nitrosodimethylamine	ND
4B	5B	benzidine	ND	43B	62B	N-nitrosodiphenylamine	ND
46B	8B	1,2,4-trichlorobenzene	ND	42B	63B	N-nitrosodi-n-propylamine	ND
33B	9B	hexachlorobenzene	ND	13B 1520	66B	bis(2-ethylhexyl)phthalate	1
36B	12B	hexachloroethane	ND	15B	67B	butyl benzyl phthalate	ND
11B	18B	bis(2-chloroethyl)ether	ND	26B 1194	68B	di-butyl phthalate	1 BL
16B	20B	2-chloronaphthalene	ND	29B	69B	di-n-octyl phthalate	ND
20B	25B	1,2-dichlorobenzene	ND	24B	70B	diethyl phthalate	ND
21B	26B	1,3-dichlorobenzene	ND	25B	71B	dimethyl phthalate	ND
27B	27B	1,4-dichlorobenzene	ND	5B	72B	benzo(a)anthracene A	ND
28B	28B	3,3'-dichlorobenzidine	ND	6B	73B	benzo(a)pyrene	ND
29B	29B	2,4-dinitrotoluene	ND	7B	74B	benzo(b)fluoranthene *	ND
30B	30B	2,6-dinitrotoluene	ND	9B	75B	benzo(k)fluoranthene *	ND
31B	31B	1,2-diphenylhydrazine	ND	18B	76B	chrysene A	ND
32B	32B	fluoranthene	ND	2B	77B	acenaphthylene	ND
33B	33B	phenyl ether	ND	3B	78B	anthracene R	ND

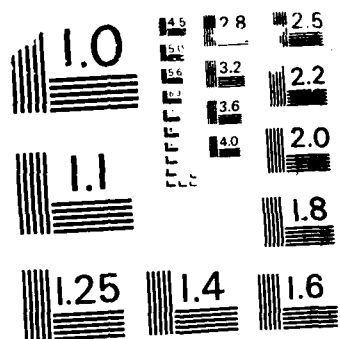
INSTALLATION RESTORATION PROGRAM PHASE 2  
CONFIRMATION/QUANTIFICATION STAG. (U) RADIAN CORP  
AUSTIN TX DEC 87 F33615-83-D-4001

**UNCLASSIFIED**

F/G 24/7

NL





MICROCOPY RESOLUTION TEST CHART  
NATIONAL BUREAU OF STANDARDS-1963-A



# LABORATORY CORPORATION

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RECEIVED: 02/25/86

Analytical Serv

Results by Sample

REPORT

LAB # 86-02-152

Continued From Above

SAMPLE ID 860186 H20

FRACTION 03A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/21/86

Category

114B	41B	4-bromophenyl phenyl ether	<u>ND</u>	8B	79B	benzo(ghi)perylene	<u>ND</u>
12B	42B	bis(2-chloroisopropyl)ether	<u>ND</u>	32B	80B	fluorene	<u>ND</u>
10B	43B	bis(2-chloroethoxy)methane	<u>ND</u>	44B	81B	phenanthrene B	<u>ND</u>
34B	52B	hexachlorobutadiene	<u>ND</u>	19B	82B	dibenzo(a,h)anthracene	<u>ND</u>
35B	53B	hexachlorocyclopentadiene	<u>ND</u>	37B	83B	indeno(1,2,3-cd)pyrene	<u>ND</u>
38B	<u>539</u>	54B isophorone	<u>2</u>	45B	84B	pyrene	<u>ND</u>
39B	55B	naphthalene	<u>ND</u>				
40B	56B	nitrobenzene	<u>ND</u>				

## SURROGATE RECOVERIES

SCAN CODE	RESULT
505 BS1	d5-nitrobenzene 75
766 BS2	2-fluorobiphenyl 88
1342 BS3	d14-terphenyl 55
BS4	d10-biphenyl

3 459

## NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.  
 All results reported in ug/l unless otherwise specified.  
 ND = not detected at EPA detection limit method 625, (Federal Register, 10/26/84).  
 + = benzo(b)fluoranthene and benzo(k)fluoranthene co-elute.  
 A = benzo(a)anthracene and chrysene co-elute high concentrations.

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-152

Continued From Above

SAMPLE ID 860186 H20

FRACTION 03A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/21/86

Category

B = anthracene and phenanthrene co-elute in high concentrations.  
 BL = detected in reagent blank; background subtraction not performed.  
 J = estimated value; less than method detection limit.  
 CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-152

SAMPLE ID 860186 H20

FRACTION 03A

TEST CODE MS 608

NAME Pesticides & PCBs by GC/MS

Date & Time Collected 02/21/86

Category

DATA FILE 5CU02152C03  
CONC. FACTOR

DATE EXTRACTED 02/25/86  
DATE INJECTED 03/10/86

ANALYST MM

VERIFIED BY LAK  
COMPOUNDS DETECTED 0

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1P	89P	aldrin	ND	2P	102P	alpha BHC	ND
10P	90P	dieldrin	ND	3P	103P	beta BHC	ND
6P	91P	chlordane	ND	4P	104P	gamma BHC	ND
7P	92P	4,4'-DDT	ND	5P	105P	delta BHC	ND
8P	93P	4,4'-DDE	ND	18P	106P	PCB-1242	ND
9P	94P	4,4'-DDD	ND	19P	107P	PCB-1254	ND
11P	95P	alpha endosulfan	ND	20P	108P	PCB-1221	ND
12P	96P	beta endosulfan	ND	21P	109P	PCB-1232	ND
14P	97P	endosulfan sulfate	ND	22P	110P	PCB-1248	ND
14P	98P	endrin	ND	23P	111P	PCB-1260	ND
15P	99P	endrin aldehyde	ND	24P	112P	PCB-1016	ND
16P	100P	heptachlor	ND	25P	113P	toxaphene	ND
17P	101P	heptachlor epoxide	ND				

EXAMINATION  
CORPORATION

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-152

Continued From Above

SAMPLE ID 860186 H20

FRACTION 03A

TEST CODE MS 608

NAME Pesticides & PCBs by GC/MS

Date & Time Collected 02/21/86

Category \_\_\_\_\_

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number on chromatogram.

All results reported in micrograms/liter unless otherwise specified.

ND = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-152

SAMPLE ID 860188 H20

FRACTION 04A

TEST CODE M625 A

NAME Method 625 Acid Compounds

Date & Time Collected 02/21/86

Category

DATA FILE 5CU02152C04  
CONC. FACTOR 5

DATE EXTRACTED 02/25/86  
DATE INJECTED 03/10/86

ANALYST  
INSTRUMENT

MM  
5100

VERIFIED BY LAK  
COMPOUNDS DETECTED 1

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
11A	21A	2,4,6-trichlorophenol	ND	7A	58A	4-nitrophenol	ND
8A	22A	4-chloro-3-methylphenol	ND	5A	59A	2,4-dinitrophenol	ND
1A	24A	2-chlorophenol	ND	4A	60A	2-methyl-4,6-dinitrophenol	ND
2A	31A	2,4-dichlorophenol	ND	9A	64A	pentachlorophenol	ND
3A	34A	2,4-dimethylphenol	ND	10A	395 65A	phenol	35
6A	57A	2-nitrophenol	ND				

3 463

SURROGATE RECOVERIES

SCAN CODE	COMPOUND	RESULT
392 AS1	d5-phenol	130
287 AS2	2-fluorophenol	45
991 AS3	2,4,6-tribromophenol	40
AS4	d3-phenol	

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.  
All results reported in ug/l unless otherwise specified.

**WILSON  
CORPORATION**

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RECEIVED: 02/25/86

Analytical Serv

REPORT

Results by Sample

LAB # 86-02-152

Continued From Above

SAMPLE ID 860188 H2O

FRACTION 04A TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected 02/21/86

Category \_\_\_\_\_

ND = not detected at EPA detection limit method 625, (Federal Register, 11/26/84).

BL = detected in reagent blank; background subtraction not performed.

J = estimated value; less than method detection limit.

CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-152

SAMPLE ID 860188 H20

FRACTION 04A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/21/86

Category

DATA FILE 5CU02152C04

DATE EXTRACTED 02/25/86

ANALYST

MM

VERIFIED BY LAK

CONC. FACTOR 5

DATE INJECTED 03/10/86

INSTRUMENT

5100

COMPOUNDS DETECTED B

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1B	872	1B	acenaphthene	250	41B	61B	N-nitrosodimethylamine ND
4B	5B	5B	benzidine	ND	43B	62B	N-nitrosodiphenylamine ND
46B	8B	8B	1,2,4-trichlorobenzene	ND	42B	63B	N-nitrosodi-n-propylamine ND
33B	9B	9B	hexachlorobenzene	ND	13B	152B	66B bis(2-ethylhexyl)phthalate 1200
36B	12B	12B	hexachloroethane	ND	15B	1431	67B butyl benzyl phthalate 150
11B	18B	18B	bis(2-chloroethyl)ether	ND	26B	1197	68B di-butyl phthalate 850 BL
16B	20B	20B	2-chloronaphthalene	ND	29B	69B	di-n-octyl phthalate ND
20B	25B	25B	1,2-dichlorobenzene	ND	24B	70B	diethyl phthalate ND
21B	26B	26B	1,3-dichlorobenzene	ND	25B	71B	dimethyl phthalate ND
22B	433	27B	1,4-dichlorobenzene	4400	5B	72B	benzo(a)anthracene A ND
23B	28B	28B	3,3'-dichlorobenzidine	ND	6B	73B	benzo(a)pyrene ND
27B	35B	35B	2,4-dinitrotoluene	ND	7B	74B	benzo(b)fluoranthene * ND
28B	36B	36B	2,6-dinitrotoluene	ND	9B	75B	benzo(k)fluoranthene * ND
29B	37B	37B	1,2-diphenylhydrazine	ND	18B	76B	chrysene A ND
31B	39B	39B	fluoranthene	ND	2B	77B	acenaphthylene ND
17B	40B	40B	4-chlorophenyl phenyl ether	ND	3B	78B	anthracene R ND

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Results by Sample

REPORT

LAB # 86-02-152

Continued From Above

SAMPLE ID 860188 H20

FRACTION 04A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/21/86

Category

148	418	4-bromophenyl phenyl ether	ND	88	798	benzo(ghi)perylene	ND
128	428	bis(2-chloroisopropyl)ether	ND	328	949	fluorene	190
108	438	bis(2-chloroethoxy)methane	ND	448	1097	phenanthrene B	590
348	528	hexachlorobutadiene	ND	198	828	dibenzo(a,h)anthracene	ND
358	538	hexachlorocyclopentadiene	ND	378	838	indeno(1,2,3-cd)pyrene	ND
388	548	isophorone	ND	458	848	pyrene	ND
398	609	naphthalene	1400				
408	568	nitrobenzene	ND				

SURROGATE RECOVERIES

SCAN CODE	RESULT
305 BS1	d5-nitrobenzene e
767 BS2	2-fluorobiphenyl 130
1349 BS3	d14-terphenyl 100
BS4	d10-biphenyl

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.  
 All results reported in ug/l unless otherwise specified.  
 ND = not detected at EPA detection limit method 625, (Federal Register, 10/26/84).  
 \* = benzo(b)fluoranthene and benzo(k)fluoranthene co-elute.  
 A = benzo(a)anthracene and chrysene co-elute high concentrations.



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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-152

Continued From Above

SAMPLE ID 860188 H20

FRACTION 04A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/21/86

Category

B = anthracene and phenanthrene co-elute in high concentrations.

BL = detected in reagent blank; background subtraction not performed.

J = estimated value; less than method detection limit.

CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-152

SAMPLE ID 860188 H20

FRACTION 04A

TEST CODE MS 608

NAME Pesticides & PCBs by GC/MS

Date & Time Collected 02/21/86

Category

DATA FILE SCU02152C04  
CONC. FACTOR

DATE EXTRACTED 02/25/86  
DATE INJECTED 03/10/86

ANALYST MM

VERIFIED BY LAK  
COMPOUNDS DETECTED 0

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1P	89P	aldrin	ND	2P	102P	alpha BHC	ND
10P	90P	dieldrin	ND	3P	103P	beta BHC	ND
6P	91P	chlordane	ND	4P	104P	gamma BHC	ND
7P	92P	4,4'-DDT	ND	5P	105P	delta BHC	ND
8P	93P	4,4'-DDE	ND	18P	106P	PCB-1242	ND
9P	94P	4,4'-DDD	ND	19P	107P	PCB-1254	ND
11P	95P	alpha endosulfan	ND	20P	108P	PCB-1221	ND
12P	96P	beta endosulfan	ND	21P	109P	PCB-1232	ND
14P	97P	endosulfan sulfate	ND	22P	110P	PCB-1248	ND
14P	98P	endrin	ND	23P	111P	PCB-1260	ND
15P	99P	endrin aldehyde	ND	24P	112P	PCB-1016	ND
16P	100P	heptachlor	ND	25P	113P	toxaphene	ND
17P	101P	heptachlor epoxide	ND				

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-152

Continued From Above

SAMPLE ID 860188 H20

FRACTION 04A TEST CODE MS 608

NAME Pesticides & PCBs by GC/MS

Date & Time Collected 02/21/86

Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number on chromatogram.

All results reported in micrograms/liter unless otherwise specified.

ND = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).

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Results by Sample

REPORT

LAB # 86-02-152

SAMPLE ID 860189 H20

FRACTION 05A

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected 02/21/86

Category

DATA FILE 5CU02152C03  
CONC. FACTOR 1

DATE EXTRACTED 02/25/86  
DATE INJECTED 03/11/86

ANALYST  
INSTRUMENT

WJL  
5100

VERIFIED BY LAK  
COMPOUNDS DETECTED 1

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
11A	21A	2,4,6-trichlorophenol	ND	7A	58A	4-nitrophenol	ND
8A	22A	4-chloro-3-methylphenol	ND	5A	59A	2,4-dinitrophenol	ND
1A	24A	2-chlorophenol	ND	4A	60A	2-methyl-4,6-dinitrophenol	ND
2A	31A	2,4-dichlorophenol	ND	9A	64A	pentachlorophenol	ND
3A	34A	2,4-dimethylphenol	ND	10A	392 65A	phenol	2
6A	57A	2-nitrophenol	ND				

3 470

SURROGATE RECOVERIES

SCAN CODE	COMPOUND	RESULT
370 AS1	d5-phenol	79
286 AS2	2-fluorophenol	75
928 AS3	2,4,6-tribromophenol	153
AS4	d3-phenol	

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.  
All results reported in ug/l unless otherwise specified.

LABORATORY CORPORATION

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Results by Sample

REPORT

LAB # 86-02-152

Continued From Above

SAMPLE ID 860189 H20

FRACTION 05A

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected 02/21/86

Category

ND = not detected at EPA detection limit method 625, (Federal Register, 11/26/84).

BL = detected in reagent blank; background subtraction not performed.

J = estimated value; less than method detection limit.

CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Results by Sample

REPORT

LAB # 86-02-152

SAMPLE ID 860189 H2O

FRACTION 05A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/21/86

Category

DATA FILE 5CU02152C05

DATE EXTRACTED 02/25/86

ANALYST

WJL

VERIFIED BY LAK

CONC. FACTOR 1

DATE INJECTED 03/11/86

INSTRUMENT

5100

COMPOUNDS DETECTED 2

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1B	1B	acenaphthene	ND	41B	61B	N-nitrosodimethylamine	ND
4B	5B	benzidine	ND	43B	970	N-nitrosodiphenylamine	11 BL
46B	8B	1,2,4-trichlorobenzene	ND	42B	63B	N-nitrosodi-n-propylamine	ND
33B	9B	hexachlorobenzene	ND	13B	66B	bis(2-ethylhexyl)phthalate	ND
36B	12B	hexachloroethane	ND	15B	67B	butyl benzyl phthalate	ND
11B	18B	bis(2-chloroethyl)ether	ND	26B	1195	di-butyl phthalate	2 BL
16B	20B	2-chloronaphthalene	ND	29B	69B	di-n-octyl phthalate	ND
20B	25B	1,2-dichlorobenzene	ND	24B	70B	diethyl phthalate	ND
21B	26B	1,3-dichlorobenzene	ND	25B	71B	dimethyl phthalate	ND
22B	27B	1,4-dichlorobenzene	ND	5B	72B	benzo(a)anthracene A	ND
23B	28B	3,3'-dichlorobenzidine	ND	6B	73B	benzo(a)pyrene	ND
27B	35B	2,4-dinitrotoluene	ND	7B	74B	benzo(b)fluoranthene *	ND
28B	36B	2,6-dinitrotoluene	ND	9B	75B	benzo(k)fluoranthene *	ND
29B	37B	1,2-diphenylhydrazine	ND	18B	76B	chrysene A	ND
31B	39B	fluoranthene	ND	2B	77B	acenaphthylene	ND
17B	40B	4-chlorophenyl phenyl ether	ND	3B	78B	anthracene R	ND

# CORPORATION

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REPORT

Results by Sample

LAB # 86-02-152

Continued From Above

SAMPLE ID 860189 H20

FRACTION 05A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/21/86

Category

14B	41B	4-bromophenyl phenyl ether	ND	8B	79B	benzo(ghi)perylene	ND
12B	42B	bis(2-chloroisopropyl)ether	ND	32B	80B	fluorene	ND
10B	43B	bis(2-chloroethoxy)methane	ND	44B	81B	phenanthrene B	ND
34B	52B	hexachlorobutadiene	ND	19B	82B	dibenzo(a,h)anthracene	ND
35B	53B	hexachlorocyclopentadiene	ND	37B	83B	indeno(1,2,3-cd)pyrene	ND
38B	54B	isophorone	ND	45B	84B	pyrene	ND
39B	55B	naphthalene	ND				
40B	56B	nitrobenzene	ND				

## SURROGATE RECOVERIES

SCAN CODE	RESULT
505 BS1	d5-nitrobenzene 120
766 BS2	2-fluorobiphenyl 126
1343 BS3	d14-terphenyl 48
BS4	d10-biphenyl

3 473

## NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.  
 All results reported in ug/l unless otherwise specified.  
 ND = not detected at EPA detection limit method 625, (Federal Register, 10/26/84).  
 \* = benzo(b)fluoranthene and benzo(k)fluoranthene co-elute.  
 A benzo(a)anthracene and chrysene co-elute at high concentrations.

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-152

Continued From Above

SAMPLE ID 860189 H20

FRACTION 05A

TEST CODE M625 B NAME Method 625 Base/Neutrals

Date & Time Collected 02/21/86

Category

B = anthracene and phenanthrene co-elute in high concentrations.

BL = detected in reagent blank; background subtraction not performed.

J = estimated value; less than method detection limit.

CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.



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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-152

SAMPLE ID 860189 H20

FRACTION 05A

TEST CODE MS 608

NAME Pesticides & PCBs by GC/MS

Date & Time Collected 02/21/86

Category

DATA FILE 5CU02152C05

DATE EXTRACTED 02/25/86

ANALYST WJL

VERIFIED BY LAK

CONC. FACTOR

DATE INJECTED 03/11/86

WJL

COMPOUNDS DETECTED 0

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1P	89P	aldrin	ND	2P	102P	alpha BHC	ND
10P	90P	dieldrin	ND	3P	103P	beta BHC	ND
6P	91P	chlordane	ND	4P	104P	gamma BHC	ND
7P	92P	4,4'-DDT	ND	5P	105P	delta BHC	ND
8P	93P	4,4'-DDE	ND	18P	106P	PCB-1242	ND
9P	94P	4,4'-DDD	ND	19P	107P	PCB-1254	ND
11P	95P	alpha endosulfan	ND	20P	108P	PCB-1221	ND
12P	96P	beta endosulfan	ND	21P	109P	PCB-1232	ND
14P	97P	endosulfan sulfate	ND	22P	110P	PCB-1248	ND
14P	98P	endrin	ND	23P	111P	PCB-1260	ND
15P	99P	endrin aldehyde	ND	24P	112P	PCB-1016	ND
16P	100P	heptachlor	ND	25P	113P	toxaphene	ND
17P	101P	heptachlor epoxide	ND				

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-152

Continued From Above

SAMPLE ID 860189 H20

FRACTION 05A TEST CODE MS 608

NAME Pesticides & PCBs by GC/MS

Date & Time Collected 02/21/86

Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number on chromatogram.

All results reported in micrograms/liter unless otherwise specified.

ND = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).

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RECEIVED: 02/25/86

Analytical Serv

Results by Sample

REPORT

LAB # 86-02-152

SAMPLE ID 860189 H20-DUP ANAL.

FRACTION 06B

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected 02/21/86

Category

DATA FILE 5CD02152C06  
CONC. FACTOR 2

DATE EXTRACTED 02/25/86  
DATE INJECTED 03/11/86

ANALYST  
INSTRUMENT

MM  
5100

VERIFIED BY LAK  
COMPOUNDS DETECTED 0

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
11A	21A	2,4,6-trichlorophenol	ND	7A	58A	4-nitrophenol	ND
8A	22A	4-chloro-3-methylphenol	ND	5A	59A	2,4-dinitrophenol	ND
1A	24A	2-chlorophenol	ND	4A	60A	2-methyl-4,6-dinitrophenol	ND
2A	31A	2,4-dichlorophenol	ND	9A	64A	pentachlorophenol	ND
3A	34A	2,4-dimethylphenol	ND	10A	65A	phenol	ND
6A	57A	2-nitrophenol	ND				

**SURROGATE RECOVERIES**

SCAN CODE	COMPOUND	RESULT
375 AS1	d5-phenol	101
272 AS2	2-fluorophenol	106
970 AS3	2,4,6-tribromophenol	143
AS4	d3-phenol	

**NOTES AND DEFINITIONS FOR THIS REPORT.**

SCAN = scan number or retention time on chromatogram.  
All results reported in ug/l unless otherwise specified.

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RECEIVED: 02/25/86

Analytical Serv

Results by Sample

REPORT

LAB # 86-02-152

Continued From Above

SAMPLE ID 860189 H2O-DUP ANAL.

FRACTION 06B

TEST CODE M625 A

NAME Method 625 Acid Compounds

Date & Time Collected 02/21/86

Category

ND = not detected at EPA detection limit method 625, (Federal Register, 11/26/84).

BL = detected in reagent blank; background subtraction not performed.

J = estimated value; less than method detection limit.

CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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REPORT

Results by Sample

LAB # 86-02-152

SAMPLE ID 860189 H2O-DUP ANAL.

FRACTION 06B

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/21/86

Category

DATA FILE	5CD02152C06	DATE EXTRACTED	02/25/86	ANALYST	MM	VERIFIED BY	LAK
CONC. FACTOR	2	DATE INJECTED	03/11/86	INSTRUMENT	5100	COMPOUNDS DETECTED	1
NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1B	1B	acenaphthene	ND	41B	61B	N-nitrosodimethylamine	ND
4B	5B	benzidine	ND	43B	952	N-nitrosodiphenylamine	14 BL
46B	8B	1,2,4-trichlorobenzene	ND	42B	63B	N-nitrosodi-n-propylamine	ND
33B	9B	hexachlorobenzene	ND	13B	66B	bis(2-ethylhexyl)phthalate	ND
36B	12B	hexachloroethane	ND	15B	67B	butyl benzyl phthalate	ND
11B	18B	bis(2-chloroethyl)ether	ND	26B	68B	di-butyl phthalate	ND
16B	20B	2-chloronaphthalene	ND	29B	69B	di-n-octyl phthalate	ND
20B	25B	1,2-dichlorobenzene	ND	24B	70B	diethyl phthalate	ND
21B	26B	1,3-dichlorobenzene	ND	25B	71B	dimethyl phthalate	ND
22B	27B	1,4-dichlorobenzene	ND	5B	72B	benzo(a)anthracene A	ND
23B	28B	3,3'-dichlorobenzidine	ND	6B	73B	benzo(a)pyrene	ND
27B	35B	2,4-dinitrotoluene	ND	7B	74B	benzo(b)fluoranthene *	ND
28B	36B	2,6-dinitrotoluene	ND	9B	75B	benzo(k)fluoranthene *	ND
29B	37B	1,2-diphenylhydrazine	ND	18B	76B	chrysene A	ND
31B	39B	fluoranthene	ND	2B	77B	acenaphthylene	ND
17B	40B	4-chlorophenyl phenyl ether	ND	3B	78B	anthracene R	ND

# WATKINS CORPORATION

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-152

Continued From Above

SAMPLE ID 860189 H20-DUP ANAL.

FRACTION 06B

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/21/86

Category

14B	41B	4-bromophenyl phenyl ether	ND	8B	79B	benzo(ghi)perylene	ND
12B	42B	bis(2-chloroisopropyl)ether	ND	32B	80B	fluorene	ND
10B	43B	bis(2-chloroethoxy)methane	ND	44B	81B	phenanthrene B	ND
34B	52B	hexachlorobutadiene	ND	19B	82B	dibenzo(a,h)anthracene	ND
35B	53B	hexachlorocyclopentadiene	ND	37B	83B	indeno(1,2,3-cd)pyrene	ND
38B	54B	isophorone	ND	45B	84B	pyrene	ND
39B	55B	naphthalene	ND				
40B	56B	nitrobenzene	ND				

## SURROGATE RECOVERIES

SCAN CODE	RESULT
<u>488</u> BS1	d5-nitrobenzene <u>89</u>
<u>749</u> BS2	2-fluorobiphenyl <u>81</u>
<u>1325</u> BS3	d14-terphenyl <u>62</u>
BS4	d10-biphenyl

## NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.  
 All results reported in ug/l unless otherwise specified.  
 ND = not detected at EPA detection limit method 625, (Federal Register, 10/26/84).  
 \* = benzo(b)fluoranthene and benzo(k)fluoranthene co-elute.  
 A = benzo(a)anthracene and chrysene co-elute high concentrations.

CORPORATION

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-152

Continued From Above

SAMPLE ID 860189 H2O-DUP ANAL.

FRACTION 06B

TEST CODE M625 B NAME Method 625 Base/Neutrals

Date & Time Collected 02/21/86

Category

B = anthracene and phenanthrene co-elute in high concentrations.  
BL = detected in reagent blank; background subtraction not performed.  
J = estimated value; less than method detection limit.  
CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

**WATKINS CORPORATION**

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-152

SAMPLE ID 860189 H2O-DUP ANAL.

FRACTION 06B

TEST CODE MS 608

NAME Pesticides & PCBs by GC/MS

Date & Time Collected 02/21/86

Category

DATA FILE 5CD02152C06

DATE EXTRACTED 02/25/86

ANALYST MM

VERIFIED BY LAK

CONC. FACTOR

DATE INJECTED 03/11/86

COMPOUNDS DETECTED 0

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1P	89P	aldrin	ND	2P	102P	alpha BHC	ND
10P	90P	dieldrin	ND	3P	103P	beta BHC	ND
6P	91P	chlordane	ND	4P	104P	gamma BHC	ND
7P	92P	4,4'-DDT	ND	5P	105P	delta BHC	ND
8P	93P	4,4'-DDE	ND	18P	106P	PCB-1242	ND
9P	94P	4,4'-DDD	ND	19P	107P	PCB-1254	ND
11P	95P	alpha endosulfan	ND	20P	108P	PCB-1221	ND
12P	96P	beta endosulfan	ND	21P	109P	PCB-1232	ND
14P	97P	endosulfan sulfate	ND	22P	110P	PCB-1248	ND
14P	98P	endrin	ND	23P	111P	PCB-1260	ND
15P	99P	endrin aldehyde	ND	24P	112P	PCB-1016	ND
16P	100P	heptachlor	ND	25P	113P	toxaphene	ND
17P	101P	heptachlor epoxide	ND				



COMPORATION

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Analytical Serv

REPORT

LAB # 86-02-152

Results by Sample

Continued From Above

SAMPLE ID 860189 H2O-DUP ANAL.

FRACTION 06B

TEST CODE MS 608

NAME Pesticides & PCBs by GC/MS

Date & Time Collected 02/21/86

Category \_\_\_\_\_

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number on chromatogram.

All results reported in micrograms/liter unless otherwise specified.

NO = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).

LABORATORY CORPORATION

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Results by Sample

REPORT

LAB # 86-02-152

SAMPLE ID 860189 H2O-MATRIX SPIKE

FRACTION 06A

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected 02/21/86

Category

DATA FILE 5CM02152C06

DATE EXTRACTED 02/25/86

ANALYST

WJL

VERIFIED BY LAK

CONC. FACTOR 1

DATE INJECTED 03/11/86

INSTRUMENT

5100

COMPOUNDS DETECTED 8

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
11A	738	21A	2,4,6-trichlorophenol	3	7A	885	58A
8A	675	22A	4-chloro-3-methylphenol	79	5A	59A	4-nitrophenol
1A	393	24A	2-chlorophenol	25	4A	60A	2,4-dinitrophenol
2A	570	31A	2,4-dichlorophenol	20	9A	64A	2-methyl-4,6-dinitrophenol
3A	545	34A	2,4-dimethylphenol	49	10A	379	65A
6A	536	57A	2-nitrophenol	11			phenol

3 4 00 4

SURROGATE RECOVERIES

SCAN CODE	COMPOUND	RESULT
377	AS1	d5-phenol
276	AS2	46
970	AS3	2-fluorophenol
	AS4	7
		2,4,6-tribromophenol
		11
		d3-phenol

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

All results reported in% Recov. unless otherwise specified.

**INFORMATION  
CORPORATION**

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REPORT

Results by Sample

LAB # 86-02-152

Continued From Above

SAMPLE ID 860189 H2O-MATRIX SPIKE

FRACTION 06A

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected 02/21/86

Category

ND = not detected at EPA detection limit method 625, (Federal Register, 11/26/84).  
SL = detected in reagent blank; background subtraction not performed.  
J = estimated value; less than method detection limit.  
CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Results by Sample

REPORT

LAB # 86-02-152

SAMPLE ID 860189 H2O-MATRIX SPIKE

FRACTION 06A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/21/86

Category

DATA FILE 5CM02152C06

DATE EXTRACTED 02/25/86

ANALYST

WJL

VERIFIED BY LAK

CONC. FACTOR 1

DATE INJECTED 03/11/86

INSTRUMENT

5100

COMPOUNDS DETECTED 46

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1B	854	1B	83	41B	160	61B	17
		acenaphthene				N-nitrosodimethylamine	
4B		5B	NA	43B	952	62B	267
		benzidine				N-nitrosodiphenylamine	
46B	592	8B	74	42B	474	63B	74
		1,2,4-trichlorobenzene				N-nitrosodi-n-propylamine	
33B	1028	9B	117	13B	1506	66B	101
		hexachlorobenzene				bis(2-ethylhexyl)phthalate	
36B	481	12B	70	15B	1409	67B	64
		hexachloroethane				butyl benzyl phthalate	
11B	397	18B	70	26B	1179	68B	100
		bis(2-chloroethyl)ether				di-butyl phthalate	
16B	763	20B	87	29B	1600	69B	82
		2-chloronaphthalene				di-n-octyl phthalate	
20B	441	25B	72	24B	927	70B	89
		1,2-dichlorobenzene				diethyl phthalate	
21B	411	26B	73	25B	818	71B	41
		1,3-dichlorobenzene				dimethyl phthalate	
22B	417	27B	61	5B	1484	72B	99
		1,4-dichlorobenzene				benzo(a)anthracene A	
23B	1483	28B	415	6B	1702	73B	88
		3,3'-dichlorobenzidine				benzo(a)pyrene	
27B	635	35B	103	7B	1652	74B	79
		2,4-dinitrotoluene				benzo(b)fluoranthene *	
28B	826	36B	106	9B	1656	75B	92
		2,6-dinitrotoluene				benzo(k)fluoranthene *	
29B		37B	NA	18B	1490	76B	111
		1,2-diphenylhydrazine				chrysene A	
31B	1262	39B	94	2B	826	77B	80
		fluoranthene				acenaphthylene	
17B	934	40B	104	3B	1084	78B	103
		4-chlorophenyl phenyl ether				anthracene R	

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-152

Continued From Above

SAMPLE ID 860189 H2O-MATRIX SPIKE

FRACTION 06A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/21/86

Category \_\_\_\_\_

148	<u>1007</u>	41B	4-bromophenyl phenyl ether	<u>114</u>	88	<u>1985</u>	79B	benzo(ghi)perylene	<u>91</u>
128	<u>457</u>	42B	bis(2-chloroisopropyl)ether	<u>71</u>	328	<u>931</u>	80B	fluorene	<u>93</u>
108	<u>558</u>	43B	bis(2-chloroethoxy)methane	<u>66</u>	448	<u>1077</u>	81B	phenanthrene B	<u>94</u>
348	<u>619</u>	52B	hexachlorobutadiene	<u>78</u>	198	<u>1927</u>	82B	dibenzo(a,h)anthracene	<u>89</u>
358	<u>726</u>	53B	hexachlorocyclopentadiene	<u>30</u>	378	<u>1923</u>	83B	indeno(1,2,3-cd)pyrene	<u>84</u>
388	<u>524</u>	54B	isophorone	<u>72</u>	458	<u>1296</u>	84B	pyrene	<u>108</u>
398	<u>599</u>	55B	naphthalene	<u>63</u>					
408	<u>491</u>	56B	nitrobenzene	<u>64</u>					

SURROGATE RECOVERIES

SCAN CODE	RESULT
<u>489</u> BS1	d5-nitrobenzene <u>91</u>
<u>750</u> BS2	2-fluorobiphenyl <u>100</u>
<u>1325</u> BS3	d14-terphenyl <u>54</u>
BS4	d10-biphenyl _____

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NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.  
 All results reported in % Recov. unless otherwise specified.  
 ND = not detected at EPA detection limit method 625, (Federal Register, 10/26/84).  
 \* = benzo(b)fluoranthene and benzo(k)fluoranthene co-elute.  
 A = benzo(a)anthracene and chrysene co-elute at high concentrations.

**WILSON  
CORPORATION**

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REPORT

Results by Sample

LAB # 86-02-152

Continued From Above

SAMPLE ID 860189 H2O-MATRIX SPIKE

FRACTION 06A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected 02/21/86

Category           

B = anthracene and phenanthrene co-elute in high concentrations.

BL = detected in reagent blank; background subtraction not performed.

J = estimated value; less than method detection limit.

CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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REPORT

LAB # 86-02-152

Results by Sample

SAMPLE ID Reagent Blank 625

FRACTION 06C

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected not specified

Category

DATA FILE 5C802152C06  
CONC. FACTOR 1

DATE EXTRACTED 02/25/86  
DATE INJECTED 03/11/86

ANALYST  
INSTRUMENT

VERIFIED BY LAK  
COMPOUNDS DETECTED 0

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
11A	21A	2,4,6-trichlorophenol	ND	7A	58A	4-nitrophenol	ND
8A	22A	4-chloro-3-methylphenol	ND	5A	59A	2,4-dinitrophenol	ND
1A	24A	2-chlorophenol	ND	4A	60A	2-methyl-4,6-dinitrophenol	ND
2A	31A	2,4-dichlorophenol	ND	9A	64A	pentachlorophenol	ND
3A	34A	2,4-dimethylphenol	ND	10A	65A	phenol	ND
6A	57A	2-nitrophenol	ND				

**SURROGATE RECOVERIES**

SCAN CODE	COMPOUND	RESULT
376 AS1	d5-phenol	81
274 AS2	2-fluorophenol	82
970 AS3	2,4,6-tribromophenol	107
AS4	d3-phenol	

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

All results reported in ug/l unless otherwise specified.

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-152

Continued From Above

SAMPLE ID Reagent Blank 625

FRACTION 06C

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected not specified

Category \_\_\_\_\_

ND = not detected at EPA detection limit method 625, (Federal Register, 11/26/84).

BL = detected in reagent blank; background subtraction not performed.

J = estimated value; less than method detection limit.

CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.



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REPORT

LAB # 86-02-152

RECEIVED: 02/25/86

Results by Sample

SAMPLE ID Reagent Blank 625

FRACTION 06C

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected not specified

Category

DATA FILE SCB02152C06 DATE EXTRACTED 02/25/86 ANALYST MM VERIFIED BY LAK  
CONC. FACTOR 1 DATE INJECTED 03/11/86 INSTRUMENT 5100 COMPOUNDS DETECTED 2

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1B	1B	acenaphthene	ND	41B	61B	N-nitrosodimethylamine	ND
4B	5B	benzidine	ND	43B	952	N-nitrosodiphenylamine	5
46B	8B	1,2,4-trichlorobenzene	ND	42B	63B	N-nitrosodi-n-propylamine	ND
33B	9B	hexachlorobenzene	ND	13B	66B	bis(2-ethylhexyl)phthalate	ND
36B	12B	hexachloroethane	ND	15B	67B	butyl benzyl phthalate	ND
11B	18B	bis(2-chloroethyl)ether	ND	26B	117B	di-butyl phthalate	1
16B	20B	2-chloronaphthalene	ND	29B	69B	di-n-octyl phthalate	ND
20B	25B	1,2-dichlorobenzene	ND	24B	70B	diethyl phthalate	ND
21B	26B	1,3-dichlorobenzene	ND	25B	71B	dimethyl phthalate	ND
22B	27B	1,4-dichlorobenzene	ND	5B	72B	benzo(a)anthracene A	ND
23B	28B	3,3'-dichlorobenzidine	ND	6B	73B	benzo(a)pyrene	ND
27B	35B	2,4-dinitrotoluene	ND	7B	74B	benzo(b)fluoranthene *	ND
28B	36B	2,6-dinitrotoluene	ND	9B	75B	benzo(k)fluoranthene *	ND
29B	37B	1,2-diphenylhydrazine	ND	18B	76B	chrysene A	ND
31B	39B	fluoranthene	ND	2B	77B	acenaphthylene	ND
17B	40B	4-chlorophenyl phenyl ether	ND	3B	78B	anthracene B	ND

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-152

Continued From Above

SAMPLE ID Reagent Blank 625

FRACTION 06C

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected not specified

Category

14B	41B	4-bromophenyl phenyl ether	ND	8B	79B	benzo(ghi)perylene	ND
12B	42B	bis(2-chloroisopropyl)ether	ND	32B	80B	fluorene	ND
10B	43B	bis(2-chloroethoxy)methane	ND	44B	81B	phenanthrene B	ND
34B	52B	hexachlorobutadiene	ND	19B	82B	dibenzo(a,h)anthracene	ND
35B	53B	hexachlorocyclopentadiene	ND	37B	83B	indeno(1,2,3-cd)pyrene	ND
38B	54B	isophorone	ND	45B	84B	pyrene	ND
39B	55B	naphthalene	ND				
40B	56B	nitrobenzene	ND				

**SURROGATE RECOVERIES**

SCAN CODE	RESULT
<u>489</u> BS1	d5-nitrobenzene <u>90</u>
<u>750</u> BS2	2-fluorobiphenyl <u>95</u>
<u>1325</u> BS3	d14-terphenyl <u>58</u>
BS4	d10-biphenyl

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**NOTES AND DEFINITIONS FOR THIS REPORT.**

SCAN = scan number or retention time on chromatogram.  
 All results reported in ug/l unless otherwise specified.  
 ND = not detected at EPA detection limit method 625, (Federal Register, 10/26/84).  
 + = benzo(b)fluoranthene and benzo(k)fluoranthene co-elute.  
 A = benzo(a)anthracene and chrysene co-elute high concentrations.

**LABORATORY CORPORATION**

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-152

Continued From Above

SAMPLE ID Reagent Blank 625

FRACTION 06C

TEST CODE M625 B NAME Method 625 Base/Neutrals

Date & Time Collected not specified

Category

B = anthracene and phenanthrene co-elute in high concentrations.

BL = detected in reagent blank; background subtraction not performed.

J = estimated value; less than method detection limit.

CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-152

SAMPLE ID Reagent Blank 625

FRACTION 06C

TEST CODE MS 608 NAME Pesticides & PCBs by GC/MS

Date & Time Collected not specified

Category

DATA FILE 5CBO2152C06

DATE EXTRACTED 02/25/86

ANALYST MM

VERIFIED BY LAK  
COMPOUNDS DETECTED 0

CONC. FACTOR

DATE INJECTED 03/11/86

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1P	89P	aldrin	ND	2P	102P	alpha BHC	ND
10P	90P	dieldrin	ND	3P	103P	beta BHC	ND
6P	91P	chlordane	ND	4P	104P	gamma BHC	ND
7P	92P	4,4'-DDT	ND	5P	105P	delta BHC	ND
8P	93P	4,4'-DDE	ND	18P	106P	PCB-1242	ND
9P	94P	4,4'-DDD	ND	19P	107P	PCB-1254	ND
11P	95P	alpha endosulfan	ND	20P	108P	PCB-1221	ND
12P	96P	beta endosulfan	ND	21P	109P	PCB-1232	ND
14P	97P	endosulfan sulfate	ND	22P	110P	PCB-1248	ND
14P	98P	endrin	ND	23P	111P	PCB-1260	ND
15P	99P	endrin aldehyde	ND	24P	112P	PCB-1016	ND
16P	100P	heptachlor	ND	25P	113P	toxaphene	ND
17P	101P	heptachlor epoxide	ND				

CORPORATION

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RECEIVED: 02/25/86

Analytical Serv

REPORT

Results by Sample

LAB # 86-02-152

Continued From Above

SAMPLE ID Reagent Blank 625

FRACTION 06C

TEST CODE MS 608

NAME Pesticides & PCBs by GC/MS

Date & Time Collected not specified

Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number on chromatogram.

All results reported in micrograms/liter unless otherwise specified.

NO = not detected at EPA detection limit method 625, (Federal Register, 12/3/79).

# CORPORATION

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RECEIVED: 02/25/86

Analytical Serv

REPORT

LAB # 86-02-152

Results by Sample

SAMPLE ID Reagent Blank 624

FRACTION 07A

TEST CODE MS 624 NAME EPA Method 624/GC-MS

Date & Time Collected not specified

Category

DATA FILE 4EB0304V000  
CONC. FACTOR 1

DATE INJECTED 03/04/86

ANALYST INSTRUMENT F4 MM

VERIFIED BY LAK  
COMPOUNDS DETECTED 0

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
3V	4V	benzene	ND	17V	32V	1,2-dichloropropane	ND
6V	6V	carbon tetrachloride	ND	18V	33V	cis-1,3-dichloropropylene	ND
7V	7V	chlorobenzene	ND	18V	33V	trans-1,3-dichloropropylene	ND
15V	10V	1,2-dichloroethane	ND	19V	38V	ethylbenzene	ND
27V	11V	1,1,1-trichloroethane	ND	22V	44V	methylene chloride	ND
14V	13V	1,1-dichloroethane	ND	21V	45V	methyl chloride	ND
28V	14V	1,1,2-trichloroethane	ND	20V	46V	methyl bromide	ND
23V	15V	1,1,2,2-tetrachloroethane	ND	5V	47V	bromoform	ND
9V	16V	chloroethane	ND	12V	48V	dichlorobromomethane	ND
10V	19V	2-chloroethylvinyl ether	ND	30V	49V	trichlorofluoromethane	ND
11V	23V	chloroform	ND	8V	51V	chlorodibromomethane	ND
16V	29V	1,1-dichloroethylene	ND	24V	85V	tetrachloroethylene	ND
26V	30V	1,2-trans-dichloroethylene	ND	25V	86V	toluene	ND
				29V	87V	trichloroethylene	ND
				31V	88V	vinyl chloride	ND

**ANALYTICAL CORPORATION**

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-152  
Continued From Above

SAMPLE ID Reagent Blank 624

FRACTION 07A TEST CODE MS 624 NAME EPA Method 624/GC-MS  
Date & Time Collected not specified Category           

**SURROGATE RECOVERIES**

SCAN CODE	COMPOUND	RESULT
<u>200</u> VS1	d4-1,2-dichloroethane	<u>101</u>
<u>377</u> VS2	dB-toluene	<u>95</u>
<u>466</u> VS3	bromofluorobenzene	<u>102</u>

**NOTES AND DEFINITIONS FOR THIS REPORT.**

SCAN = scan number or retention time on chromatogram.  
All results reported in ug/l unless otherwise specified.  
ND = not detected at EPA detection limit method 624, (Federal Register, 10/26/84).  
BL = detected in reagent blank; background subtraction not performed.  
J = estimated value; less than method detection limit.  
CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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REPORT

Results by Sample

LAB # 86-02-152

SAMPLE ID Method Spike -625

FRACTION 08A

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected not specified

Category QC

DATA FILE 5CM03052C05  
CONC. FACTOR 1

DATE EXTRACTED 03/10/86  
DATE INJECTED 03/27/86

ANALYST  
INSTRUMENT 5100

VERIFIED BY LAK  
COMPOUNDS DETECTED 11

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
11A 717	21A	2,4,6-trichlorophenol	100	7A 858	58A	4-nitrophenol	79
8A 656	22A	4-chloro-3-methylphenol	90	5A 841	59A	2,4-dinitrophenol	39
1A 374	24A	2-chlorophenol	73	4A 924	60A	2-methyl-4,6-dinitrophenol	90
2A 551	31A	2,4-dichlorophenol	95	9A 1030	64A	pentachlorophenol	99
3A 527	34A	2,4-dimethylphenol	49	10A 361	65A	phenol	62
6A 516	57A	2-nitrophenol	97				

3 490

SURROGATE RECOVERIES

SCAN CODE	COMPOUND	RESULT
360 AS1	d5-phenol	57
258 AS2	2-fluorophenol	55
946 AS3	2,4,6-tribromophenol	94
AS4	d3-phenol	NA

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

All results reported in % Recov. unless otherwise specified.



**ENVIRONMENTAL  
CORPORATION**

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Results by Sample

REPORT

LAB # 86-02-152

Continued From Above

SAMPLE ID Method Spike -625

FRACTION 08A

TEST CODE M625 A NAME Method 625 Acid Compounds

Date & Time Collected not specified

Category GC

ND = not detected at EPA detection limit method 625, (Federal Register, 11/26/84).

BL = detected in reagent blank; background subtraction not performed.

J = estimated value; less than method detection limit.

CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

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Results by Sample

REPORT

LAB # 86-02-152

SAMPLE ID Method Spike -625

FRACTION 08A

TEST CODE M625 B NAME Method 625 Base/Neutrals

Date & Time Collected not specified

Category QC

DATA FILE SCMO3052C05  
CONC. FACTOR 1

DATE EXTRACTED 03/10/86  
DATE INJECTED 03/27/86

ANALYST MM  
INSTRUMENT 5100

VERIFIED BY LAK  
COMPOUNDS DETECTED 46

NPDES SCAN	EPA	COMPOUND	RESULT	NPDES SCAN	EPA	COMPOUND	RESULT
1B 821	1B	acenaphthene	81	41B 153	61B	N-nitrosodimethylamine	25
4B	5B	benzidine	NA	43B 929	62B	N-nitrosodiphenylamine	97
46B 552	8B	1,2,4-trichlorobenzene	83	42B 455	63B	N-nitrosodi-n-propylamine	67
33B 1003	9B	hexachlorobenzene	116	13B 1477	66B	bis(2-ethylhexyl)phthalate	73
36B 462	12B	hexachloroethane	60	15B 1381	67B	butyl benzyl phthalate	35
11B 369	18B	bis(2-chloroethyl)ether	58	26B 1153	68B	di-butyl phthalate	83
16B 741	20B	2-chloronaphthalene	84	29B 1568	69B	di-n-octyl phthalate	82
20B 422	25B	1,2-dichlorobenzene	66	24B 904	70B	diethyl phthalate	77
21B 392	26B	1,3-dichlorobenzene	67	25B 796	71B	dimethyl phthalate	48
22B 398	27B	1,4-dichlorobenzene	64	5B 1454	72B	benzo(a)anthracene A	90
23B 1454	28B	3,3'-dichlorobenzidine	125	6B 1661	73B	benzo(a)pyrene	89
27B 863	35B	2,4-dinitrotoluene	89	7B 1615	74B	benzo(b)fluoranthene *	101
28B 804	36B	2,6-dinitrotoluene	86	9B 1619	75B	benzo(k)fluoranthene *	94
29B	37B	1,2-diphenylhydrazine	NA	18B 1460	76B	chrysene A	84
31B 1234	39B	fluoranthene	97	2B 803	77B	acenaphthylene	77
17B 910	40B	4-chlorophenyl phenyl ether	97	3B 1058	78B	anthracene B	97

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Results by Sample

REPORT

LAB # 86-02-152

Continued From Above

SAMPLE ID Method Spike -625

FRACTION 08A

TEST CODE M625 B

NAME Method 625 Base/Neutrals

Date & Time Collected not specified

Category QC

14B	<u>1234</u>	41B	4-bromophenyl phenyl ether	<u>97</u>	8B	<u>191B</u>	79B	benzo(ghi)perylene	<u>90</u>
12B	<u>455</u>	42B	bis(2-chloroisopropyl)ether	<u>67</u>	32B	<u>907</u>	80B	fluorene	<u>83</u>
10B	<u>539</u>	43B	bis(2-chloroethoxy)methane	<u>77</u>	44B	<u>1051</u>	81B	phenanthrene B	<u>89</u>
34B	<u>599</u>	52B	hexachlorobutadiene	<u>102</u>	19B	<u>1865</u>	82B	dibenzo(a,h)anthracene	<u>97</u>
35B		53B	hexachlorocyclopentadiene	<u>NA</u>	37B	<u>1863</u>	83B	indeno(1,2,3-cd)pyrene	<u>98</u>
38B	<u>505</u>	54B	isophorone	<u>79</u>	45B	<u>1267</u>	84B	pyrene	<u>70</u>
39B	<u>569</u>	55B	naphthalene	<u>76</u>					
40B	<u>473</u>	56B	nitrobenzene	<u>72</u>					

SURROGATE RECOVERIES

SCAN CODE	RESULT
<u>470</u> BS1	d5-nitrobenzene <u>72</u>
<u>729</u> BS2	2-fluorobiphenyl <u>72</u>
<u>1297</u> BS3	d14-terphenyl <u>44</u>
BS4	d10-biphenyl <u>NA</u>

3 501

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.  
 All results reported in % Rec. unless otherwise specified.  
 NO = not detected at EPA detection limit method 625, (Federal Register, 10/26/84).  
 + = benzo(b)fluoranthene and benzo(k)fluoranthene co-elute.  
 A benzo(a)anthracene and chrysene co-elute at high concentrations.

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Results by Sample

REPORT

LAB # 86-02-152

Continued From Above

SAMPLE ID Method Spike -625

FRACTION 08A

TEST CODE M625 B NAME Method 625 Base/Neutrals

Date & Time Collected not specified

Category QC

B = anthracene and phenanthrene co-elute in high concentrations.

BL = detected in reagent blank; background subtraction not performed.

J = estimated value; less than method detection limit.

CONC. FACTOR: indicates dilution of sample if greater than one (1). Minimum detection limits should be multiplied by conc. factor.

**INFORMATION  
CORPORATION**

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REPORT

LAB # 86-02-152

NonReported Work

FRACTION AND TEST CODES FOR WORK NOT REPORTED ELSEWHERE

05B : DUP\_NS

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04/02/86 16:46:26

REPORT

LAB # 86-02-159

REPORT Radian

TO BL 4

Austin

ATTEN Larry French

CLIENT PLANT 4

COMPANY Plant 4

FACILITY Carswell AFB (Gen. Dynamics)

SAMPLES 7

WORK ID groundwater

TAKEN WJ

TRANS Fed Ex

TYPE

P.O. # 212-027-27-40

INVOICE under separate cover

PREPARED Radian Analytical Services

BY 8501 Mopac Blvd

P.O. Box 9948

Austin, Texas 78766

ATTEN

PHONE (512) 454-4797

CERTIFIED BY

CONTACT CONOVER

*Carl Sano*

Unknown compound eluting here

Second column confirmations for EPA 601: -02, -03, -04;  
for EPA 602: -02

Footnotes and Comments

\* Indicates a value less than 5 times the detection limit.  
Potential error for such low values ranges between  
50 and 100%.

3 504

@ Indicates that spike recovery for this analysis on the  
specific matrix was not within acceptable limits indicating  
an interferent present.

SAMPLE IDENTIFICATION

01 860190  
02 860191  
03 860192  
04 860193  
05 860194  
06 field blank  
07 trip blank

Analytical Serv TEST CODES and NAMES used on this report

AG\_E Silver, ICPEs  
AS\_GA Arsenic, low level  
BA\_E Barium, ICPEs  
CD\_E Cadmium, ICPEs  
CR\_E Chromium, ICPEs  
DG3020 Digestion by Method 3020  
DG6010 Digestion by Method 6010  
GC\_601 EPA Method 601/GC  
GC\_602 EPA Method 602/GC  
HG\_CA Mercury, Cold Vapor  
PB\_GA Lead, low level  
SE\_GA Selenium, low level

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Analytical Serv REPORT  
RESULTS BY TEST

LAB # 86-02-159

TEST CODE	Sample 01 (entered units)	Sample 02 (entered units)	Sample 03 (entered units)	Sample 05 (entered units)
AG_E ug/ml	0.005*	0.006*	0.004*	0.004*
AS_GA ug/ml	<.002	0.009*	<.002	0.029
BA_E ug/ml	0.074	0.095	0.11	0.13
CD_E ug/ml	<.002	<.002	<.002	<.002
CR_E ug/ml	0.012*	0.024*	<.005	0.022*
DG3020 date complete	03/12/86	03/12/86	03/12/86	03/12/86
DG6010 date complete	03/18/86	03/18/86	03/18/86	03/18/86
HG_GA ug/ml	<.0002	<.0002	0.0002*	<.0002
PB_GA ug/ml	0.006	0.009	<.001	0.013
SE_GA ug/ml	<.003	<.003	<.003	<.003

# CORPORATION

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Results by Sample

LAB # 86-02-159

SAMPLE ID 860190

FRACTION 01A

TEST CODE GC 601

NAME EPA Method 601/GC

Date & Time Collected 02/25/86

Category

DATA FILE		DATE INJECTED		02/26/86		ANALYST		VERIFIED BY MCL	
CONC FACTOR		1		0		INSTRUMENT		COMPOUNDS DETECTED	
SCAN		COMPOUND		RESULT		SCAN		COMPOUND	
---		Chloromethane		ND		---		Trichloroethane	
---		Bromomethane		ND		---		Dibromochloromethane *	
---		Vinyl Chloride		ND		---		1,1,2-Trichloroethane *	
---		Chloroethane		ND		---		cis-1,3-Dichloropropene *	
---		Methylene Chloride		ND		---		2-Chloroethylvinyl Ether	
---		Trichlorofluoromethane		ND		---		Bromoform	
---		1,1-Dichloroethene		ND		---		1,1,2,2-Tetrachloroethane #	
---		1,1-Dichloroethane		ND		---		Tetrachloroethylene #	
---		trans-1,2-Dichloroethene		ND		---		Chlorobenzene	
---		Chloroform		ND		---		1,3-Dichlorobenzene	
---		1,2-Dichloroethane		ND		---		1,2-Dichlorobenzene	
---		1,1,1-Trichloroethane		ND		---		1,4-Dichlorobenzene	
---		Carbon Tetrachloride		ND		---			
---		Bromodichloromethane		ND		---			
---		1,2-Dichloropropene		ND		---			
---		trans-1,3-Dichloropropene		ND		---			



CORPORATION

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Analytical Serv

REPORT

LAB # 86-02-159

Results by Sample

Continued From Above

SAMPLE ID 860190

FRACTION 01A

NAME EPA Method 601/GC

Date & Time Collected 02/25/86

Category

NOTES AND DEFINITIONS FOR THIS REPORT

SCAN = scan number or retention time on chromatogram.

All results reported in ug/L unless otherwise specified.

ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79).

\*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.

#1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

**CORPORATION**

LAB # 86-02-159

Analytical Serv REPORT

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Results by Sample

SAMPLE ID 860190

FRACTION OIC TEST CODE GC 602 NAME EPA Method 602/GC

Date & time Collected 02/25/86 Category

DATA FILE \_\_\_\_\_ D \_\_\_\_\_ DATE INJECTED 02/27/86 ANALYST \_\_\_\_\_ MCL \_\_\_\_\_ VERIFIED BY MCL  
 CONC. FACTOR \_\_\_\_\_ 1 \_\_\_\_\_ INSTRUMENT \_\_\_\_\_ d \_\_\_\_\_ COMPOUNDS DETECTED 1

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
_____	Benzene	ND :	_____	1,4-Dichlorobenzene	ND
1	Toluene	0.73 :	_____	1,3-Dichlorobenzene	ND
_____	Ethyl Benzene	ND :	_____	1,2-Dichlorobenzene	ND
_____	Chlorobenzene	ND :	_____		

**NOTES AND DEFINITIONS FOR THIS REPORT:**

SCAN = scan number or retention time on chromatogram  
 All results reported in \_\_\_\_\_ µg/L unless otherwise specified.  
 ND = not detected at EPA detection limit method 602, (Federal Register, 12/3/79)

**CORPORATION**

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Analytical Serv  
Results by Sample

LAB # 86-02-159

SAMPLE ID 860191

FRACTION 02A  
Date & Time Collected 02/25/86

TEST CODE GC 601 NAME EPA Method 601/GC  
Category

DATA FILE \_\_\_\_\_  
CONC. FACTOR \_\_\_\_\_

DATE INJECTED 02/26/86

ANALYST \_\_\_\_\_  
INSTRUMENT \_\_\_\_\_

VERIFIED BY MCL  
COMPOUNDS DETECTED 5

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
---	Chloromethane	ND	4	Trichloroethene	132
---	Bromomethane	ND	---	Dibromochloromethane *	ND
---	Vinyl Chloride	ND	---	1,1,2-Trichloroethane *	ND
---	Chloroethane	ND	---	cis-1,3-Dichloropropene *	ND
---	Methylene Chloride	ND	---	2-Chloroethylvinyl Ether	ND
---	Trichlorofluoromethane	ND	---	Bromoform	ND
1	1,1-Dichloroethene	32.1	---	1,1,2,2-Tetrachloroethane #	ND
---	1,1-Dichloroethane	ND	5	Tetrachloroethylene #	3.01
2	trans-1,2-Dichloroethene	48.4	---	Chlorobenzene	ND
---	Chloroform	ND	---	1,3-Dichlorobenzene	ND
---	1,2-Dichloroethane	ND	---	1,2-Dichlorobenzene	ND
3	1,1,1-Trichloroethane	10.4	---	1,4-Dichlorobenzene	ND
---	Carbon Tetrachloride	ND			
---	Bromodichloromethane	ND			
---	1,2-Dichloropropane	ND			
---	trans-1,3-Dichloropropene	ND			

**CORPORATION**

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REPORT

Results by Sample

LAB # 86-02-159

Continued From Above

SAMPLE ID 860191

FRACTION 02A

TEST CODE GC 601 NAME EPA Method 601/GC

Date & Time Collected 02/25/86

Category

**NOTES AND DEFINITIONS FOR THIS REPORT.**

SCAN = scan number or retention time on chromatogram.  
All results reported in ug/L unless otherwise specified.  
ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79).  
\*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.  
#1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

**CORPORATION**

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Results by Sample

REPORT

LAB # 86-02-159

Category

SAMPLE ID 860191 FRACTION 02C TEST CODE GC 602 NAME EPA Method 602/GC

Date & Time Collected 02/25/86

DATA FILE \_\_\_\_\_ D DATE INJECTED 02/27/86 ANALYST \_\_\_\_\_ MCL \_\_\_\_\_ VERIFIED BY MCL \_\_\_\_\_

CONC. FACTOR \_\_\_\_\_ INSTRUMENT \_\_\_\_\_ d COMPOUNDS DETECTED \_\_\_\_\_

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
---	Benzene	ND	---	1,4-Dichlorobenzene	ND
---	Toluene	ND	---	1,3-Dichlorobenzene	ND
---	Ethyl Benzene	ND	---	1,2-Dichlorobenzene	ND
---	Chlorobenzene	ND	---		

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

All results reported in \_\_\_\_\_ ug/L unless otherwise specified.

ND = not detected at EPA detection limit method 602 (Federal Register, 12/2/79)

# CORPORATION

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Analytical Serv  
Results by Sample

LAB # 86-02-159

SAMPLE ID 860192

FRACTION Q3A

TEST CODE GC 601

NAME EPA Method 601/GC

Date & Time Collected 02/25/86

Category

DATA FILE: 1 G DATE INJECTED 02/25/86 ANALYST: MCL VERIFIED BY MCL  
CONC. FACTOR: 1 INSTRUMENT: 3 COMPOUNDS DETECTED: 1

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
	Chloromethane	ND	1	Trichloroethene	2.62
	Bromomethane	ND		Dibromochloromethane *	ND
	Vinyl Chloride	ND		1,1,2-Trichloroethane *	ND
	Chloroethane	ND		cis-1,3-Dichloropropene *	ND
	Methylene Chloride	ND		2-Chloroethylvinyl Ether	ND
	Trichlorofluoromethane	ND		Bromoform	ND
	1,1-Dichloroethene	ND		1,1,2,2-Tetrachloroethane #	ND
	1,1-Dichloroethane	ND		Tetrachloroethylene #	ND
	trans-1,2-Dichloroethene	ND		Chlorobenzene	ND
	Chloroform	ND		1,3-Dichlorobenzene	ND
	1,2-Dichloroethane	ND		1,2-Dichlorobenzene	ND
	1,1,1-Trichloroethane	ND		1,4-Dichlorobenzene	ND
	Carbon tetrachloride	ND			
	Bromodichloromethane	ND			
	1,2-Dichloropropane	ND			
	trans-1,3-Dichloropropene	ND			

ENVIRONMENTAL  
CORPORATION

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REPORT

Results by Sample

LAB # 86-02-159

Continued From Above

SAMPLE ID 860192

FRACTION 03A TEST CODE QC 601 NAME EPA Method 601/GC

Date & Time Collected 02/25/86

Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

All results reported in ug/L unless otherwise specified.

ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79).

\*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.  
#1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

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REPORT

LAB # 86-02-159

Results by Sample

SAMPLE ID 860192

FRACTION 03C

TEST CODE GC 602

NAME EPA Method 602/GC

Date & Time Collected 02/25/86

Category

DATA FILE \_\_\_\_\_ D \_\_\_\_\_ DATE INJECTED 02/27/86 ANALYST \_\_\_\_\_ RP \_\_\_\_\_ VERIFIED BY MCL  
CONC. FACTOR 1 INSTRUMENT 1 COMPOUNDS DETECTED 1

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
	Benzene	ND		1,4-Dichlorobenzene	ND
1	Toluene	0.84		1,3-Dichlorobenzene	ND
	Ethyl Benzene	ND		1,2-Dichlorobenzene	ND
	Chlorobenzene	ND			

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

All results reported in \_\_\_\_\_ ug/l unless otherwise specified.

ND = not detected at EPA detection limit method 602, (Federal Register, 10/3/79)



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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-159

SAMPLE ID 860193

FRACTION 04A

TEST CODE GC 601

NAME EPA Method 601/GC

Date & Time Collected 02/25/86

Category

DATA FILE	CONC.	FACTOR	G	DATE INJECTED	02/25/86	ANALYST	RP	INSTRUMENT	g	COMPOUNDS DETECTED	1	VERIFIED BY MCL
SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT	SCAN
	Chloromethane	ND								Trichloroethene	5902	
	Bromomethane	ND								Dibromochloromethane	*	ND
	Vinyl Chloride	ND								1,1,2-Trichloroethane	*	ND
	Chloroethane	ND								cis-1,3-Dichloropropene	*	ND
	Methylene Chloride	ND								2-Chloroethylvinyl Ether		ND
	Trichlorofluoromethane	ND								Bromoform	ND	
	1,1-Dichloroethene	ND								1,1,2,2-Tetrachloroethane	#	ND
	1,1-Dichloroethane	ND								Tetrachloroethylene	#	ND
	trans-1,2-Dichloroethene	ND								Chlorobenzene	ND	
	Chloroform	ND								1,3-Dichlorobenzene	ND	
	1,2-Dichloroethane	ND								1,2-Dichlorobenzene	ND	
	1,1,1-Trichloroethane	ND								1,4-Dichlorobenzene	ND	
	Carbon Tetrachloride	ND										
	Bromodichloromethane	ND										
	1,2-Dichloropropane	ND										
	trans-1,3-Dichloropropene	ND										

MAHARAJA CORPORATION

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-159

Continued From Above

SAMPLE ID 860193

FRACTION 04A

TEST CODE GC 601

NAME EPA Method 601/GC

Date & Time Collected 02/25/86

Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

All results reported in ug/L unless otherwise specified.

ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79).

\*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.  
#1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

**LABORATORY CORPORATION**

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Analytical Serv

Results by Sample

REPORT

LAB # 86-02-159

SAMPLE ID 860193

FRACTION 04C

TEST CODE GC 602

NAME EPA Method 602/GC

Date & Time Collected 02/25/86

Category

DATA FILE \_\_\_\_\_ D  
CONC. FACTOR \_\_\_\_\_ 50

DATE INJECTED 02/27/86

ANALYST \_\_\_\_\_ RP  
INSTRUMENT \_\_\_\_\_ d

VERIFIED BY MCL  
COMPOUNDS DETECTED \_\_\_\_\_ 0

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
_____	Benzene	ND ;	_____	1,4-Dichlorobenzene	ND
_____	Toluene	ND ;	_____	1,3-Dichlorobenzene	ND
_____	Ethyl Benzene	ND ;	_____	1,2-Dichlorobenzene	ND
_____	Chlorobenzene	ND ;			

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NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

All results reported in \_\_\_\_\_ ug/L unless otherwise specified.

ND = not detected at EPA detection limit method 602, (Federal Register, 12/3/79).

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Analytical Serv  
Results by Sample

LAB # 86-02-159

SAMPLE ID 860194

FRACTION 05A  
Date & Time Collected 02/25/86

TEST CODE GC 601 NAME EPA Method 601/GC  
Category

DATA FILE	DATE INJECTED	ANALYST	RP	VERIFIED BY
CONC. FACTOR		INSTRUMENT	g	COMPOUNDS DETECTED
SCAN	COMPOUND	RESULT	SCAN	COMPOUND
---	Chloromethane	ND	---	Trichloroethene
---	Bromomethane	ND	---	Dibromochloromethane *
---	Vinyl Chloride	ND	---	1,1,2-Trichloroethane *
---	Chloroethane	ND	---	cis-1,3-Dichloropropene *
---	Methylene Chloride	ND	---	2-Chloroethylvinyl Ether
---	Trichlorofluoromethane	ND	---	Bromoform
---	1,1-Dichloroethene	ND	---	1,1,2,2-Tetrachloroethane #
---	1,1-Dichloroethane	ND	1	Tetrachloroethylene #
---	trans-1,2-Dichloroethene	ND	---	Chlorobenzene
---	Chloroform	ND	---	1,3-Dichlorobenzene
---	1,2-Dichloroethane	ND	---	1,2-Dichlorobenzene
---	1,1,1-Trichloroethane	ND	---	1,4-Dichlorobenzene
---	Carbon Tetrachloride	ND	---	
---	Bromodichloromethane	ND	---	
---	1,2-Dichloropropane	ND	---	
---	trans-1,3-Dichloropropene	ND	---	

CORPORATION

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Analytical Serv

REPORT

Results by Sample

LAB # 86-02-159

Continued From Above

SAMPLE ID 860194

FRACTION 05A

TEST CODE GC 601

NAME EPA Method 601/GC

Date & Time Collected 02/25/86

Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

All results reported in ug/l unless otherwise specified.

ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79).

\*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.

#1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

**CORPORATION**

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LAB # 86-02-159

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Results by Sample

SAMPLE ID 860194

FRACTION OSC TEST CODE GC 602 NAME EPA Method 602/GC

Date & Time Collected 02/25/86

Category

DATA FILE \_\_\_\_\_ D \_\_\_\_\_ DATE INJECTED 02/27/86 ANALYST \_\_\_\_\_ RP \_\_\_\_\_ VERIFIED BY MCL  
 CONC. FACTOR \_\_\_\_\_ 1 \_\_\_\_\_ INSTRUMENT \_\_\_\_\_ d \_\_\_\_\_ COMPOUNDS DETECTED 1

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
_____	Benzene	ND	_____	1,4-Dichlorobenzene	ND
3	Toluene	0.51	_____	1,3-Dichlorobenzene	ND
520	Ethyl Benzene	ND	_____	1,2-Dichlorobenzene	ND
_____	Chlorobenzene	ND	_____	_____	_____

**NOTES AND DEFINITIONS FOR THIS REPORT.**

SCAN = scan number or retention time on chromatogram.

All results reported in \_\_\_\_\_ ug/L unless otherwise specified

ND = not detected at EPA detection limit method 602, (Federal Register, 12/3/79)

# CORPORATION

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Results by Sample

REPORT

LAB # 86-02-159

SAMPLE ID field blank

FRACTION 06A

TEST CODE GC 601

NAME EPA Method 601/GC

Date & Time Collected 02/25/86

Category

DATA FILE	CONC. FACTOR	G	DATE INJECTED	02/26/86	ANALYST	INSTRUMENT	RP	VERIFIED BY	MCL
		1					9	COMPOUNDS DETECTED	0
SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT				
	Chloromethane	ND		Trichloroethene	ND				
	Bromomethane	ND		Dibromochloromethane *	ND				
	Vinyl Chloride	ND		1,1,2-Trichloroethane *	ND				
	Chloroethane	ND		cis-1,3-Dichloropropene *	ND				
	Methylene Chloride	ND		2-Chloroethylvinyl Ether	ND				
	Trichlorofluoromethane	ND		Bromoform	ND				
	1,1-Dichloroethene	ND		1,1,2,2-Tetrachloroethane #	ND				
	1,1-Dichloroethane	ND		Tetrachloroethylene #	ND				
	trans-1,2-Dichloroethene	ND		Chlorobenzene	ND				
	Chloroform	ND		1,3-Dichlorobenzene	ND				
	1,2-Dichloroethane	ND		1,2-Dichlorobenzene	ND				
	1,1,1-Trichloroethane	ND		1,4-Dichlorobenzene	ND				
	Carbon tetrachloride	ND							
	Bromodichloromethane	ND							
	1,2-Dichloropropane	ND							
	trans-1,3-Dichloropropene	ND							

**CORPORATION**

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Results by Sample

LAB # 86-02-159

Continued From Above

SAMPLE ID field blank

FRACTION 06A

TEST CODE GC 601

NAME EPA Method 601/GC

Date & Time Collected 02/25/86

Category

NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.

All results reported in ug/L unless otherwise specified.

ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79).

\*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.

#1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.



**CORPORATION**

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Results by Sample

LAB # 86-02-159

SAMPLE ID field blank

FRACTION 06B TEST CODE GC 602 NAME EPA Method 602/GC  
Date & time Collected 02/25/86 Category

DATA FILE: D  
CONC. FACTOR: 1  
DATE INJECTED 02/27/86  
ANALYST: RP  
INSTRUMENT: 3  
VERIFIED BY MCL  
COMPOUNDS DETECTED: 1

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
	Benzene	ND		1,4-Dichlorobenzene	ND
1	Toluene	0.54		1,3-Dichlorobenzene	ND
	Ethyl Benzene	ND		1,2-Dichlorobenzene	ND
	Chlorobenzene	ND			

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NOTES AND DEFINITIONS FOR THIS REPORT.

SCAN = scan number or retention time on chromatogram.  
All results reported in uq/L unless otherwise specified.  
ND = not detected at EPA detection limit method 602, (Federal Register, 12/3/79)

# CORPORATION

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Results by Sample

REPORT

LAB # 86-02-159

SAMPLE ID trip blank

FRACTION Q7A

TEST CODE GC 601 NAME EPA Method 601/GC

Date & time Collected not specified

Category

DATA FILE	CONC.	FACTOR	G	DATE INJECTED	02/26/86	ANALYST	INSTRUMENT	RP	VERIFIED BY	MCL	COMPOUNDS DETECTED	0
			1					g				
SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT							
	Chloromethane	ND		Trichloroethane	ND							
	Bromomethane	ND		Dibromochloromethane *	ND							
	Vinyl Chloride	ND		1,1,2-Trichloroethane *	ND							
	Chloroethane	ND		cis-1,3-Dichloropropene *	ND							
	Methylene Chloride	ND		2-Chloroethylvinyl Ether	ND							
	Trichlorofluoromethane	ND		Bromoform	ND							
	1,1-Dichloroethane	ND		1,1,2,2-Tetrachloroethane #	ND							
	1,1-Dichloroethane	ND		Tetrachloroethylene #	ND							
	trans-1,2-Dichloroethane	ND		Chlorobenzene	ND							
	Chloroform	ND		1,3-Dichlorobenzene	ND							
	1,2-Dichloroethane	ND		1,2-Dichlorobenzene	ND							
	1,1,1-Trichloroethane	ND		1,4-Dichlorobenzene	ND							
	Carbon tetrachloride	ND										
	Bromodichloromethane	ND										
	1,2-Dichloropropane	ND										
	trans-1,3-Dichloropropene	ND										

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**LABORATORY CORPORATION**

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REPORT

Results by Sample

LAB # 86-02-159

Continued From Above

SAMPLE ID trip blank

FRACTION 07A

TEST CODE GC 601 NAME EPA Method 601/GC

Date & Time Collected not specified

Category

**NOTES AND DEFINITIONS FOR THIS REPORT**

SCAN = scan number or retention time on chromatogram.

All results reported in ug/L unless otherwise specified.

ND = not detected at EPA detection limit method 601, (Federal Register, 12/3/79).

\*Dibromochloromethane, 1,1,2-trichloroethane and cis-1,3-dichloropropene co-elute.

#1,1,2,2-tetrachloroethane and tetrachloroethylene co-elute.

# LABORATORY

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REPORT

LAB # 86-02-159

RECEIVED: 02/26/86

Results by Sample

SAMPLE ID trip blank

FRACTION 07A

TEST CODE GC 602 NAME EPA Method 602/GC

Date & Time Collected not specified

Category

DATA FILE D DATE INJECTED 03/05/86 ANALYST --- MCL --- VERIFIED BY MCL  
 CONC. FACTOR 1 INSTRUMENT --- d --- COMPOUNDS DETECTED 0

SCAN	COMPOUND	RESULT	SCAN	COMPOUND	RESULT
	Benzene	ND		1,4-Dichlorobenzene	ND
	Toluene	ND		1,3-Dichlorobenzene	ND
	Ethyl Benzene	ND		1,2-Dichlorobenzene	ND
	Chlorobenzene	ND			

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NOTES AND DEFINITIONS FOR THIS REPORT:

SCAN = scan number or retention time on chromatogram.

All results reported in --- ug/l unless otherwise specified

ND = not detected at EPA detection limit method 602, (Federal Register, 12/3/79)

LABORATORY  
CORPORATION

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REPORT

NonReported Work

LAB # 86-02-159

FRACTION AND TEST CODES FOR WORK NOT REPORTED ELSEWHERE

01B	:	DUP601	01D	:	DUP602
02B	:	DUP601	02D	:	DUP602
03B	:	DUP601	03D	:	DUP602
04B	:	DUP601	04D	:	DUP602
05B	:	DUP601	05D	:	DUP602

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